Clinical Lectures ON CASES OF INTRA-THORACIC PRESSURE.

Delivered at King's College Hospital,

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LECTURE II.—PART I.

THE next case to which I wish to call your attention is that of a woman, thirty-eight years of age, married, with no children, who lost her father at fifty years of age of chest disease, and also two sisters of phthisis. She was admitted into the Twining ward the 8th of February. I first saw her at the Brompton Hospital on the 15th of November, 1876, when she complained of a cough which she had had for two years, and of dyspnœa which she had suffered from for two months, and which had become much aggravated during the preceding four weeks. Her voice was weak and very hoarse. She swallowed solid food with difficulty. There was only slight expectoration; but on three occasions, after severe fits of coughing, she had brought up a little blood. She did not complain of emaciation, or of nocturnal perspiration, and the catamenia were regular. What was most noticeable about her at this time was a prolonged, harsh, noisy, stridulent inspiration, just such as we may hear in cases of laryngeal or tracheal obstruction; but on examination with the laryngoscope the vocal cords were found to be quite healthy and to move freely, and there was no sign of constriction of the trachea. On percussion of the chest, pulmonary resonance was fairly equal on both sides, back and front. The anterior wall of the chest was somewhat bulged generally, as in emphysema; and on auscultation the loud, harsh, inspiratory sound was heard, conducted all over the chest, and the expiration was somewhat prolonged and wheezing, especially over the right apex. But there were no moist crepitant or bronchitic râles anywhere to be heard. An important point in the physical examination of the chest was the discovery of a distinct rounded prominence situated over the manubrium sterni, and extending a little to the right of this bone. There was decided dulness on percussion over this spot, and this patch of dulness extended about an inch to the right of the margin of the sternum. Percussion over this dull and prominent area was painful, and, on auscultation, loud tracheal breathing was heard over it. Careful inquiry elicited a distinct syphilitic history, and, thinking it probable that this was a case of syphilitic post-sternal node pressing upon parts at the aperture of the thorax, I ordered her iodide of potassium and perchloride of mercury, and small doses of morphia and chloric ether for the paroxysms of cough and dyspnœa.

When I saw her a fortnight afterwards I was surprised to find how much benefit she had derived from this treatment. The hoarseness and dysphagia had almost disappeared, and the area of dulness over and to the right of the manubrium had sensibly diminished. There was still some cough and dyspnœa, and the expiratory sound at the right apex was prolonged. About a month later, and while she was continuing to take the iodide, the hoarseness and feebleness of voice returned, and on examination with the laryngoscope it was noticed that the *left vocal cord did not move freely*; this was once again observed during her stay in the hospital by our house-physician, Mr. Tirard.

She had been attending for about three months as an out-patient, when one day she was brought to the hospital suffering from a very severe attack of suffocative dyspnœa, with great distress and anxiety of countenance. Her complexion was of a decidedly dusky hue, her pulse small and rapid, and she appeared so seriously ill that I sent her into this hospital at once.

In addition to the symptoms and physical signs I have already described she had now somewhat wasted; her face was pale and slightly livid; her voice was feeble and whispering; she could not lie down in bed. She could swallow fluids, and with difficulty a little bread. There was loud tracheal breathing, with especially harsh grating inspiratory sound heard over the prominence at the base of the sternum. Respiratory expansion was feeble, and less on the right than on the left side. Vocal fremitus was slightly increased at the right apex. Sonorous bronchitic râles were heard over both lungs. There was the same circumscribed area of dulness which we had before noticed over the manubrium sterni, and to the right of it, and there was much tenderness on percussion over this part of the chest. Mindful of the benefit she had originally derived from the iodide of potassium and perchloride of mercury, I determined to give her the same medicine in larger doses. She was ordered twenty grains of iodide of potassium three times a day, with a drachm of the solution of perchloride of mercury, and she was also given small doses of morphia with ether and ammonia for the paroxysms of suffocative dyspnœa.

Under this treatment, together with rest in bed, she rapidly mended. Ten days after her admission it was noted that she was "greatly improved, sleeps well, appetite good, dulness at base of sternum not so marked, tenderness much less, voice louder and clearer."

On Feb. 27th she had some return of her symptoms. She complained of pain and tenderness in the right supra-clavicular region, of more cough, coming on spasmodically, and of a choking sensation in the throat. The voice was hoarse and almost inaudible. Iodine paint was applied over the base of the sternum, and the iodide and the perchloride ordered to be continued. She again mended rapidly, and about six weeks after her admission she left the hospital and became an out-patient. At that time the local tenderness had almost entirely disappeared; the prominence of the manubrium had decidedly grown less, and the percussion note in this region was more resonant than formerly.

Now this patient's condition appeared so grave when I sent her into the hospital that I had little hope she would leave it alive; and, no doubt, her state was a very serious one. The rapid amelioration which her symptoms underwent under the influence of large doses of iodide of potassium combined with mercury, the diminution simultaneously of the tenderness, the prominence and the area of dulness at the base of the sternum, went far to confirm my original opinion that we had to do in this case with the very rare circumstance of the development of a syphilitic post-sternal node compressing the trachea at its bifurcation, pressing at times upon the pneumogastric nerve, and pushing the trachea back against the œsophagus. Hence the dysphagia, the long stridulent inspiration, the paroxysms of suffocative dyspnœa and "choking," the partial and temporary loss of voice, the vomiting, &c.; compression of nerves probably having the greater share in the production of the distressing paroxysmal phenomena.

But we have not yet done with this patient; she returned here three weeks ago, and not so well as when she left the hospital, at which time the iodide was discontinued. She complained of much retro-sternal pain, of dyspnœa, and of a choking sensation when she attempted to lie down in bed. She had also a troublesome cough with white frothy expectoration, and her voice was again weak and hoarse. There was still an obvious prominence on the right of the manubrium, and some dulness on percussion there. On auscultation in front, the respiratory sound on the left side was much weaker than on the right; on both sides it was very harsh in quality. The expiration was, on both sides, prolonged and accompanied with a faint wheeze. There was a peculiar sound with the inspiration, which could be heard when standing close to the patient without listening to the chest; but it is difficult to describe it because of its faintness; if it were much louder it might be said to resemble a whistle. I believe it depends on some slight diminution in the calibre of the trachea, near its bifurcation, or of one of the large bronchi, from compression.

This recurrence of some of the symptoms induced me for a moment to speculate whether, after all, there might not be some slowly progressing malignant growth in the anterior mediastinum, over the progress of which the iodide of potassium had exercised some retarding influence. But I gave large doses of the iodide again, and waited the result. It must be borne in mind that it is unusual for malignant growths in the mediastinum to project any part of the chest wall; and this has been suggested as one of the means of separating the clinical aspects of such tumours from those of thoracic aneurism, as aneurisms of the thoracic aorta fre-

quently cause erosion and bulging of the wall of the chest. I have excluded the possibility of aneurism all along, in this case, for several reasons. There has never been the slightest pulsation, thrill, expansile impulse, or abnormal vascular murmur over or adjacent to the area of dulness at any time; the heart-sounds, though feeble, have been always normal; there is no evidence of cardiac hypertrophy; both radial pulses are equal.

Continued administration, in this case, of the iodide of potassium in thirty-grain doses has been attended with complete recovery from all the serious symptoms, and I cannot doubt that we had here to do with the rare circumstance of the development of a syphilitic post-sternal node compressing important structures at the upper aperture of the thorax.

The next case I have to bring to your notice is one of a very unusual kind, or perhaps not so rare in its kind as in the mode of onset of the initial symptoms. We were much in doubt for some time how to account for these symptoms; and the majority of my colleagues at Brompton, who gave me the advantage of their opinions, were disposed to regard the case (as I myself was) as one of enlargement of the bronchial glands. A good deal of attention has recently been directed, especially in France, to the important part which enlargement of those glands plays in the production of some of the most serious symptoms of thoracic disease. Those who devote themselves specially to the study of diseases of children are tolerably familiar with this form of chest affection; but it has been left to certain French physicians, and notably to Dr. Noel Guéneau de Mussy, to insist on the not infrequent occurrence of what they term *adénopathie bronchique*—i. e., enlargement of the bronchial glands—in the adult. Slight or moderate enlargements of these glands, associated with phthisical and other forms of chest disease, are no doubt common enough, and are indeed frequently demonstrated in our post-mortem rooms; but I cannot admit that enlargement of the bronchial glands, sufficient to cause serious symptoms of pressure within the thorax, and existing independently of other disease within the chest, is by any means a common form of chest affection amongst adults—at any rate in this country.

Out of a very great number of patients suffering from all forms of chest disease that have come under my observation during a series of years, I cannot call to mind half a dozen cases of adult patients in which it could be clearly shown that the symptoms they manifested were dependent on enlargement of the bronchial glands. Dr. Guéneau de Mussy would doubtless say that this might be accounted for by defective observation on my part; and I am willing to admit that, since I have been acquainted with his writings and those of other French physicians on this subject, I have been keeping a sharper look out than formerly for cases of this kind; but although I think it certain that the true nature of cases of this kind has not infrequently been overlooked, and that Dr. Guéneau de Mussy deserves great credit for the excellent clinical description he has given of them, yet I believe he is in error in thinking them of frequent occurrence, and that he places too much reliance on the method he describes of establishing the physical diagnosis of this affection. What this method is I shall have to inform you by and by. For the present let us turn to our case.

The patient, a young girl sixteen years of age, was brought to me at the Brompton Hospital on February 28th, 1877, complaining of cough and shortness of breath, which had been coming on gradually for about three weeks. The cough had become very troublesome, and the dyspnœa really alarming. On the morning of that day, she had first noticed some difficulty in swallowing. Solid food, she said, seemed to stop opposite the upper part of the trachea, and when she drank anything the food slipped down. She had lost her mother of "dropsy," one sister of phthisis, and another of chronic joint disease. She herself had always had fairly good health, and was able to work as a general servant. The catamenia were regular. *A year ago she had a severe fall and hurt her back.* She was fairly nourished, and had a healthy aspect. There was no fever; pulse 72; temperature normal; tongue clean; and appetite fairly good. But with this absence of general constitutional disturbance, we had the most striking picture of interference with the respiratory functions in the form of some impediment to the entrance of air into the lungs, accompanied with irritative cough. The inspiration was very characteristic—it was very loud, harsh, stridulent, and prolonged. The expiration was also much prolonged and slightly hissing. The cough was harsh, dry, and grating. There was no expectoration. On auscultation, loud, harsh, snoring breath-sounds were heard all over the chest, but no moist râles could anywhere be detected. These snoring sounds were loudest over the first piece of the sternum, where they appeared to originate, and here the expiratory sound had a distinctly blowing character. There was no abnormal dulness on percussion at any spot on the chest wall anteriorly, but we thought (and I should say that this patient was examined by several of my colleagues) we could distinguish a distinctly dull spot corresponding with the inner portion of the right supraspinous fossa, and the adjacent dorso-scapular region—i. e., between the bodies of the second, third, and fourth dorsal vertebræ, and the posterior border of the scapula. Over this spot the breathing also had a blowing character. But simple inspection of the anterior surface of the chest was most instructive. During each long, noisy inspiration, as the diaphragm was depressed and the capacity of the thoracic cavity thereby increased, since there existed some impediment to the entrance of air into the lungs, the evidence of increased atmospheric pressure on the surface of the chest was most marked. Not only was there noticeable depression of the suprasternal notch (as is seen in croup), and of the supraclavicular fossæ, but there was also obvious compression of the upper intercostal spaces, which sank in during inspiration, so that there was depression of the upper third of the chest on both sides. Another instructive phenomenon observed on inspection was a distinct pulsation in the second left intercostal space, near the sternum, synchronous with the cardiac systole. This we believed to be due to uncovering of the pulmonary artery from retraction of the margin of the lung, a consequence of its imperfect expansion from obstruction to the free entrance of air into the air-passages. There was no alteration in the voice, and on laryngoscopic examination the vocal cords and the interior of the larynx and trachea were seen to be in a perfectly healthy condition. The dyspnœa was so alarming that I could not allow her to leave the hospital, and she was (contrary to the rules) admitted into the Brompton Hospital, until she was in a fit condition to be transferred hither.

Believing that much of the distress in these cases of intra-thoracic pressure is due to nerve irritation, and having found much relief afforded in similar cases by a combination of morphine and ether, I ordered this patient a sixth of a grain of acetate of morphia in half an ounce of our ether and ammonia mixture every four hours, and that she should be put to bed. In two days, on March 2nd, all the distressing symptoms had disappeared. The cough was nearly gone; there was no remarkable dyspnœa, and all that remained to call attention to her condition was the long-drawn, somewhat hissing inspiration. Physical examination of the chest, however, revealed much the same signs, in a minor degree, as I have already described, with the exception of the sonorous respiration, which was absent. She was well enough to be transferred to this hospital on the 5th of March. She remained here three or four weeks, and was then discharged entirely relieved of the symptoms for which she was originally admitted.

Now, the sequel of this case is most interesting and instructive. The patient has returned to the hospital this afternoon, and there can now be no longer any doubt as to the real nature of the affection from which she has been suffering. When first I examined this patient I called attention to an unusual prominence of the spinous process of the last cervical vertebra, and to an unusual fixity of the dorsal region of the spine, and we took into consideration the fall she had had on her back a year previously; but we were disposed to think that this could not be directly connected with the symptoms of pressure on the air-passages or on the respiratory nerves from which she was obviously suffering. Now, however, it is quite clear that mischief about the cervical vertebræ was the origin of all her symptoms. She has been out of the hospital nearly three months; during the first half of that period she remained tolerably well, but for the last month, she tells us, she has suffered greatly. She has had severe pain in the cervical region of the spine, especially about the two last cervical and the first dorsal vertebræ. The pain has extended forwards to the sternum and down the left side. She has also had considerable difficulty in swallowing solid food. She does not complain now of cough or dyspnœa. The upper part of the chest is depressed on both sides, as already mentioned; the inspiratory expansion is very slight, and the inspiratory breath-sounds short, loud, and harsh. On examination of the spine, we find all the characteristic signs of

caries of the cervical vertebræ. The spines of the last two cervical vertebræ are extremely prominent, and above them there is a very marked depression.

The position and attitude of the head are also very characteristic. The head is projected forwards, the chin very prominent, the natural movements greatly restricted. The head is kept fixed and rigid. She can move it very slightly and very slowly to either side. She cannot flex the head or bear the chin to be depressed without suffering pain; but she can extend the head backwards without any difficulty. She cannot lie on her back or on her right side without pain. She lies pretty comfortably on her left side.

I must not now diverge into a discussion of all the interesting points associated with this instructive case of caries of the cervical vertebræ, but I wish now to call your attention especially to the fact that the initial symptoms which induced this patient to apply for help at the Brompton Hospital were those of pressure on parts within or at the upper aperture of the thorax—viz., dyspnœa, prolonged stridulent inspiration, defective chest expansion, cough, dysphagia. It is a remarkable circumstance, and one not easy to account for, that these symptoms of pressure existed and were most pronounced *before* the spinal deformity became well-marked, and since the occurrence of the spinal deformity we have had no such remarkable manifestations of intrathoracic pressure. We naturally thought of the possibility of the existence of an abscess pointing forwards from the spine, and constricting the aperture of the thorax, or compressing the respiratory nerves; but we can find no other evidence of the existence of an abscess. (This is equally true now, more than six months since the patient first came under observation.)[1] When, however, we consider how rapidly the more severe symptoms disappeared with rest in bed and a few doses of morphine and ether, it is safer, perhaps, to conclude that they depended on temporary nerve irritation. (Considerable wasting of the muscles of the right arm, accompanied with much pain in the limb, which supervened in the course of this case, pointed conclusively to pressure on the trunks of some of the spinal nerves.)

Leaving, for the present, the further history of this instructive case, I shall next ask your attention to one which presents an entirely different aspect from those which have preceded.

ON

SURGICAL EVIDENCE IN COURTS OF LAW,

WITH SUGGESTIONS FOR ITS IMPROVEMENT.

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I.—ON THE POSITION OF SURGICAL WITNESSES, AND ON CONFLICTS OF EVIDENCE.

SURGEONS are now very frequently called into Courts of Law as witnesses in civil actions. Formerly this rarely happened; the surgeon but seldom appeared in the witness-box, except in cases of malpractice, which, in this country, have happily rarely become the subject of judicial investigation. In criminal cases a surgeon used occasionally to be called, as he is at present, either as an ordinary witness or as an "expert," to guide the Court in the solution of some intricate medico-legal problem. With physicians the case has been different. In Civil Courts they were frequently seen as witnesses in commissions *de lunatico inquirendo*, and in contested will cases. In the Criminal Courts, in a numerous class of cases in which the law has to seek the aid of medicine to guide it to a just conclusion, the opinion of the skilled physician has necessarily been sought in his capacity of medical jurist or scientific chemist. But all this is now altered. The class of cases in which the physician is called continue as heretofore, but those in which the evidence of the surgeon is needed have enormously increased in number as well as in importance. These cases are not criminal. They are of a purely civil nature. I wish it to be clearly understood that it is to them alone that my observations will apply. Anyone who has had much experience in these cases must feel that, as the law now stands, a serious and very unnecessary inconvenience is inflicted on the medical practitioner. Much valuable time is wasted, the public convenience is disturbed, and in many instances it is a matter of grave doubt whether the ends of justice have been attained.

The more frequent appearance of the surgeon in Courts of Law at the present day is mainly owing to the change that has come over our social habits during the last quarter of a century. The enormous increase of locomotion by railway, tramway, omnibus, and steamboat; the crowded state of the streets; and the many perilous occupations in which multitudes of people are engaged have greatly increased the number of accidents of all kinds. Many of these are, undoubtedly, the fault, more or less directly, of the sufferers themselves, who either are the victims of their own carelessness or contribute by their neglect of ordinary precautions to the occurrence of the catastrophe. But in a vast proportion of the cases this is not so, and the sufferer believes himself to have been the victim of the neglect of those who were bound to exercise ordinary care in respect to him. In such cases he appeals to the law to soothe his sufferings and mitigate his losses by an award of damages from those by the acts of whose servants he has sustained personal injury. The claim for the compensation which he seeks may be divided into three categories. He first of all claims and is entitled to the expenses that have been entailed upon him in consequence of the accident in the way of surgical and medical attendance, nursing, change of air, extra food, &c. Secondly, he claims and is entitled to fair compensation for the loss that he has sustained in his business or profession. With those two items the surgeon has, necessarily, nothing whatever to do; they are entirely matters for the consideration of the legal advisers of the parties, and an equitable adjustment of them can very commonly, and without great difficulty, be obtained. The third item in the claim for compensation has reference to the medical aspects of the case. It is founded on the severity, and the extent of his injuries, the probable duration of his sufferings and incapacity for work. It is in the determination of these questions that the patient is necessarily compelled to seek the aid of the practitioner under whose care he has been. But in addition to this he usually takes the advice of some surgeon of known skill and judgment not only to guide him in the treatment of his injuries, but to advise him as to their probable course, duration, and consequences, and thus to enable him to form some estimate of the claim that he may make in respect to them. Thus, from the very first, two classes of practitioners are imported into these cases—namely, the ordinary medical attendant and the consulting surgeon; but in addition to this a third soon makes its appearance, be it a rail, tram, omnibus, or steamboat company through the neglect of whose servants the injury has been inflicted. The company very naturally and very properly seeks to ascertain for its own guidance the truth of the statements made by the alleged sufferer. Having ascertained that he has been injured, it is of much importance that the company should know the extent, the nature, and more especially the duration of the injuries which incapacitate him for the ordinary exercise of his duties, and for which he seeks to obtain compensation. Accordingly a third surgical element is added to the two already existing, in the shape of the medical officer of, or the consulting surgeon to, the company. Thus we have from an early period in the case three surgeons, or more commonly groups of surgeons, for they are often multiplied, or increased by the addition of specialists. Their number in the course of time also becomes swollen by the various medical practitioners whom the patient consults at different watering-places or health-resorts to which he has been advised to repair for the restoration of his shattered frame. Thus it not unfrequently happens that as many as from ten to fifteen surgeons and medical practitioners, of various kinds and from widely different parts of the country, become involved in the case as it progresses. As the law now stands, every one of these surgeons may be, and probably will be, subpœnaed as a witness on one side or the other if the case goes on to trial. It is thought that the plaintiff's case will be prejudiced if any surgeons under whose care he has been should happen not to be called. If, when subpœnaed, a surgeon who knows but little of the case very naturally says to the attorney, "It is really of no use for me to attend; the case is one of which I have seen but little, and I can be of no service to you;" or

[1] This case is now in Mr. Lister's wards, to whose care the patient was transferred.

if he thinks it to be an unimportant or trivial one, and remarks that in his opinion it is a very light one, and his testimony can really add no weight to it, the reply usually is, "We are very sorry to trouble you, and will take care that you are inconvenienced as little as possible; but if it comes out that you have seen the patient, and are not called, we fear it will prejudice our client's case." If subpœnaed, the surgeon must, under severe penalties, attend on the day of trial, and from day to day so long as it lasts, and he must do this wherever the venue is laid. The country surgeon may thus be brought up to the metropolis, or the London surgeon carried down to some possibly far distant assize town in the provinces. He must leave his practice, however extensive, and his patients, however numerous, and however serious and urgent their cases may be. The medical practitioner must leave the case of typhoid, which he has watched sedulously up to its crisis; he must absent himself from the woman who is hourly expecting her confinement, or whom he has delivered but a day or two previously. The surgeon must leave the case of retention, which his skilled hand can alone relieve; he must give over the amputation, the hernia, or the breast case operated on but a few days previously, and hanging between life and death, to the care of an assistant or a fellow-practitioner, who may know nothing of it. He must do this under the penalty of a fine of £100, and all the possible consequences that may ensue in being punished for "contempt of court" if he disobeys the summons of the subpœna. No reason is valid for absence except illness, and this he may have to prove by a witness in court. He may suffer all this inconvenience, and his patients submit to all this peril, in the cause of a patient whom he has attended gratuitously in a hospital, from whom he never has received, or will receive, a farthing; he may be subpœnaed in this way on the most trivial pretences.

About twenty-five years ago the writer of this article had under his care in the hospital a girl who, as she was walking along the street, had the misfortune to have the fore part of her foot crushed by the wheel of a coal-waggon. The injured part of the foot was removed by Chopart's amputation. When the girl was recovering, the writer one day casually said to the surrounding students, and partly to encourage the patient, that he thought she would not be much the worse for the injury she had sustained, as he had known a young lady who had suffered the same amputation able to walk and even to dance without the mutilation being detected. The owner of the coal-waggon in some way heard of these remarks, and the writer was subpœnaed by him in order to prove that the girl was no worse for the loss of half a foot? The case, happily, did not come on for trial, being settled out of court.

One peculiar hardship that the habit of indiscriminately subpœnaing medical men in these cases inflicts upon the profession, and one which greatly aggravates the difficulty and inconvenience of their position, is this—that, as no day can be fixed for the trial, unless it happens to be the first on the list, he is kept in a state of uncertainty as to when it comes on, and often for days previously he is unable to make any appointment for consultation or operation with a certainty of being able to keep it. The hardship to the medical practitioner, when he is suddenly called away from his professional duties, is much greater than to the man of business under similar circumstances. The work of the professional man is usually of a purely personal character, and cannot well be deputed to others. Hence his professional losses are proportionately great. But the man of business habitually transacts some of his work through the instrumentality of partners, clerks, and agents, and his business does not consequently cease, nor does it even, in most cases, suffer by a few days of compulsory absence.

Now, for what grave ends is the surgeon subjected to this great inconvenience and loss, and the safety of his patients imperilled? Is it to give such evidence as will lead to the conviction of a poisoner, or to the acquittal of one falsely accused of some great criminal offence? Is it to lend his aid to the vindication of public justice? Is it even to give evidence that can in any way seriously influence one way or the other the most trivial case? The evidence that he may have to give is perhaps absolutely valueless so far as the real justice of the case is concerned, but it is thought that unless called "the case may be prejudiced." Hence the surgeon, at a great sacrifice of time, to the detriment of the well-being of his patients, is called to speak to the injuries of a person whom he may only have seen once or twice, whose symptoms he can barely recollect, and in whose case he does not feel the slightest interest. He is called merely to swell the damages possibly by a very trivial amount. For Smith has brought his action against the Great Smashem Line; the negligence is admitted; the Company has paid a sum of money into court, which their advisers contend to be adequate compensation. The plaintiff is not satisfied with the amount, and issue is joined for the recovery of some additional amount to which he considers himself entitled, such as the medical charges, or for the legal costs "as between attorney and client." The whole case is, indeed, narrowed down to the smallest possible compass. It becomes simply an assessment of damages within a very narrow margin, which very probably may be settled after brief consultation between the opposing counsel as soon as the plaintiff's evidence has been heard, and without a single witness being called. For this great end every medical man who, in any way and at any time, has been consulted by the plaintiff, is forced to attend in support of his claim. Surely the machinery thus set in motion is altogether out of all proportion to the results aimed at, and many are endangered that one may profit.

Now it may be said—and the argument is a perfectly sound one so far as it goes—that the surgeon, being a citizen and protected by the law, must in his turn, when required, like every other good citizen, set aside all his private affairs, and give his aid to the law when it requires his services. Undoubtedly this is so; and if the surgeon were the only person inconvenienced, he would have no reason to offer why he should be treated differently, as a witness, from any other member of the community. But the peculiar hardship here is that it is not the surgeon alone, but his patients, who are the real and principal sufferers by his compulsory absence. Setting aside the anxiety that is necessarily entailed upon him in being suddenly removed from important avocations, the only real loss sustained by the surgeon himself is a pecuniary one, though that in some cases might possibly be no slight matter. But even this loss is not always or necessarily sustained by him, for in many cases, more especially if a skilled witness, he is able to make arrangements with respect to fees that may be satisfactory to himself, and indemnify him against probable though not possible contingencies. But the penalty is, in reality, paid by his patients. They are the sufferers, and persons who have no concern whatever with the case, who can receive no remuneration whatever for the inconvenience to which they are subjected, may suffer most seriously by the sudden withdrawal of the services of their medical attendant. In this way a most prejudicial effect may be produced upon the health of one, the cure of the illness of another is suspended, or life itself may be imperilled, by the enforced and prolonged absence of the surgeon. This is no imaginary picture; the writer has often experienced it in his own practice, and knows that other surgeons have done the same in theirs, and their patients have suffered the greatest possible anxiety and inconvenience in having their surgical attendant suddenly withdrawn from them. Not only does very serious inconvenience, then, occur to others besides the surgeon who is thus called away from his professional duties, so far as his private patients are concerned, but his public duties are also brought to a standstill; and if he be a hospital surgeon, a teacher in one of the larger medical schools, or officially connected with one of the great medical examining bodies, hundreds of persons—patients, students, and colleagues—may most seriously be inconvenienced, and suffer much by his compulsory absence from his duties.

So great have these evils become that some of the leading surgeons now refuse altogether to see patients who have been injured on railways, or whose cases may become the subject of litigation. It is clear that if this practice were generally adopted the victims of such accidents would doubly suffer, for not only would they have sustained injuries, often of the most serious and protracted character, but they would find that the best and most skilled surgical advice was withheld from them. The refusal to see patients who have thus been injured, although under the circumstances perfectly justifiable, has an appearance of harshness, and is certainly not in accordance with those feelings which prompt surgeons to be ever ready to render aid to those in need, regardless of consequences to themselves. Other surgeons again, if they consent to see the patient, do so only on the distinct understanding that they are not to be called as witnesses if the case goes on to trial. Such an understanding given by the patient is, I need scarcely say, absolutely

worthless, for if the attorney thinks that the evidence of the surgeon so consulted will benefit his client's case, he necessarily and very properly, from his point of view, disregards his client's promise, and subpœnaes the surgeon who can assist him. Thus the present mode of calling surgical witnesses to speak to the sufferings of the injured has a tendency to deprive those who are unhappily the victims of the negligence of the great carrying companies of much of the most skilled surgical aid which this country can offer. The position of the surgeon is, in fact, this: If he refuses to see the patient injured he not only damages his own practice, but inflicts a hardship on the sufferer; whilst if he sees him he punishes himself for his act of humanity by bringing on himself a subpœna compelling him, perhaps at a great sacrifice of time and at much inconvenience to his other patients, to attend at the trial. The position in which the surgeon is thus placed is most anomalous. The members of the medical profession, indeed, stand in a totally different relation towards the public in these respects to that of the members of any other profession or calling. Their position is as peculiar as it is anomalous. They are supposed to be ever ready to obey the call of those in distress, whether from sickness or from injury, and the very obedience they show to the summons in the case of some of those injured may eventually place them in a position to be unable to render to others the aid demanded of them. A surgeon actually engaged in practice is exempt from serving on a jury, because his compulsory absence from his practice might be attended by serious inconvenience to the public at large. A surgeon, like every other duly qualified citizen, would have to discharge the duties of a juryman without regard to personal inconvenience or loss, were it not that the compulsory and perhaps prolonged absence from his practice might entail serious and even perilous consequences on his patients and the public. Now the inconvenience that arises by compelling surgeons, regardless of their other professional duties, public and private, to absent themselves from their practice, often for days together, in order to attend as witnesses in compensation cases, is certainly attended by at least as much detriment to the public good and convenience as would be their absence if serving on the jury which had to assess the claim. It can signify little to a woman in labour whether her medical attendant is detained in the jury-box or in the well of the court: from neither can he be released, however urgent her need, until his evidence has been given, or possibly till the case to which he has been called is concluded. But it may be said that it is easy for a surgeon to find a substitute, and to have his work done by deputy during his absence. Patients object much to the intrusion of a stranger in the place of their ordinary medical attendant, and will often only submit to it in cases of extreme urgency; and I have sometimes known it to happen that as many as two or three practitioners are summoned from one small country town as witnesses in the same case, and are detained in London for three or four days, and thus a gap is left in the medical practice of the district which it is not easy to fill, more especially at a short notice.

(To be continued.)

THE TEMPERATURE OF THE HUMAN BODY.

BY SURGEON-MAJOR J. P. BOILEAU, A.B., M.D., &c.,
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WHILST reading *The Times* of Jan. 30th, my attention was arrested by a paragraph headed "Heat of the Body." It referred to observations made by Surgeon-Major J. Crosse Johnston, M.D., in medical charge of the 43rd Regiment, which were published in the Army Medical Department Reports for 1876, just issued. Dr. Johnston's observations led him to doubt that the increase of body temperature supposed to be involved in a residence in the tropics was either so constant or so considerable as has been assumed, and his investigations established the legitimacy of his misgivings.

I am very much gratified to find that doubts of a similar nature which I first entertained nearly ten years ago are thus proved to have been well founded, and it is a very material and noteworthy circumstance that Dr. Johnston should—from observations made in the eastern world—independently have arrived at the same conclusions that I arrived at some years ago, from observations made in the western world—namely, that the temperature of man in intertropical regions is not higher than it is in temperate regions.

In 1838 Dr. John Davy published his "Physiological and Anatomical Researches," in which may be found the following words:—"The temperature of man increases in passing from a cold or even temperate climate into one that is warmer; and the temperature of inhabitants of warm climates is permanently higher than those of mild climates." In the Philosophical Transactions for 1844 we find his "Observations on Animal Heat," and read: "From observations made on man on entering the tropics, or within the tropics, or descending from a cool mountainous district to a hot low country, it would appear that his temperature, as measured by a thermometer placed under his tongue, is liable to fluctuate—rising one or two degrees in a warm atmosphere, and falling as much on entering a cool one." A detail of his experiments will be found in his "Physiological Researches," published in 1863.

Ever since Dr. Davy wrote on the subject of animal temperature, it seems to have been accepted and taught that the temperature of the body in the tropics is about one degree higher than it would be in the temperate regions of the globe, and I confess that I had taken a number of temperatures of man in southern climes before the light dawned upon me, which Dr. Johnston brings before us in the clearness of day.

It was in the West Indies, in 1871, in the very island where Dr. Davy's celebrated observations were made, that I became convinced that man's normal temperature in the tropics is the same as it is elsewhere; and more than four years ago, in a communication on the "Obscure Alliances of Typhoid," which was published in THE LANCET of August 23rd, 1873, I concluded my paper with the following words: "As a result of many thousands of observations on the temperature of the white man in various climes, with shade temperatures as high as 105° F. and as low as 20° below zero, I have been led to the conclusion that the normal axillary temperature of the healthy adult is between 98° and 99° F.; in fact, it seems to me that this temperature is as valuable and as constant a characteristic of his human identity as is the structure of his bones. The fact may be already established, but as the idea that human temperature is one degree higher in the tropics than elsewhere has been widely entertained and supported by high authority, I here mention the fact that I have observed."

The coincidence of Dr. Johnston's views and my own is more than gratifying, for I believe this subject to be one of great importance. Imagine a medical man relying, as he should, on the indications of his thermometer, pronouncing a person in Trinidad or Ceylon to be free from fever when his temperature was over 100° F., assuming such to be a normal temperature in the tropics. Imagine him permitting a convalescent to leave hospital, his temperature being over 100 F., when, if the case occurred in England, he would know that the patient's convalescence was not established. Imagine him labouring under the impression that 100° or 99° in the tropics indicated the same state of things as 99° or 98° at home—dealing, in fact, with any case of illness.

It seems to me that we should be quite certain about the answer to this question. If I go from latitude 50° to latitude 5°, am I to consider myself in a state of health although my temperature rises permanently to the extent of 1° F.? I have little hesitation in answering that such would indicate some abnormal state. Is it not very natural to suppose that a persistent deviation from that temperature of man's blood to which the rest of his organisation has been adapted must lead to a derangement inconsistent with the maintenance of health? But, at all events, my reasons for differing from those who have held that the normal temperature of man is higher in the tropics than elsewhere have been based on observations made, not on one, two, three, or three dozen men, but on hundreds of men; on observations made, not with one or two thermometers, but with a score of thermometers; on observations made, not in a few days, weeks, or months, but over a period of years; and it has for a long time been my decided impression that the permanent axillary temperature of the healthy adult man in the tropics is lower than that hitherto given by authority as the average temperature of the body in this country.

I would suggest for consideration the effect of increased elimination—especially in the way of the cutaneous transpiration which occurs in warm climates—in tending to more than neutralise the effect of high atmospheric temperatures. This is, however, a point on which I would reserve opinion, for I am much inclined to think that this apparent lowering of temperature in hot climates may be explained by future investigations showing that the temperature now given in text-books as the average normal standard in temperate climates is too high.

It is necessary for me to state here that all my observations on the temperature of man have been taken from the axillæ, and they were for the most part made between the hours of 7 and 9 A.M. and 5 and 7 P.M. The thermometers used were either the long thermometers of Casella recommended by Dr. Aitken, or varieties of the six-inch instruments which have latterly come so much into use. I have never taken any buccal, rectal, or vaginal temperatures, believing them to be, for anything but local purposes, unsatisfactory and unnecessary. All proper precautions to ensure accuracy in results have been carefully attended to—such as perfect adaptation of the thermometer bulb in the axillæ, exclusion of external influences, proper duration of observation, &c. In a large number of cases the temperature of both axillæ were simultaneously taken, and the observations repeated, changing the thermometers from one side to the other, thus getting four results.

Dr. Davy used one verified thermometer for nearly all the observations on which he relied for the important conclusions published in his essays, and he himself was the sole object of those particular experiments. He said: "The observations which I have made with this thermometer have been altogether made on myself." He was about fifty-five years of age at the time, and I would direct attention to the words in which he described his state of health. He did not use such words as "vigorous," "robust," "perfect," or "excellent," or even the unqualified word "good." He wrote, "The health of the observer was pretty good." There never can be a doubt about the accuracy, fidelity, and reliability of Dr. Davy's experiments, but it does not follow that his temperature, when in Barbadoes, represents the average state of a race of healthy adults between twenty and forty years of age in extra-temperate zones.

In conclusion, I must say that, until the matter is further investigated, it seems to be very unsafe to assume that man's temperature in hot climates is higher than it is in colder places; and, for my part, I cannot but think that a persistent axillary temperature as high as 99° F., either at home or abroad, would be indicative of something wrong, however slight it might be.

An error, manifestly clerical, occurs in Dr. Johnston's paper, and has been copied into *The Times*. The rise of body heat supposed to be effected by each degree of air temperature should be 0·03°, not 0·3°.

P.S.—I wish to take this opportunity of supplying an omission in my paper on the Obscure Alliances of Typhoid, above referred to, by stating that the "medical publication" alluded to in it is the *Medical Press and Circular* of July 14th, 1869, in which were published some remarks of mine on the Temperature of the Air in Upper Canada and the Paroxysmal Fevers of the Colony.

CASE OF POPLITEAL ANEURISM;

LIGATURE OF THE FEMORAL AFTER FAILURE OF REID'S METHOD.

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THE cases hitherto published of popliteal aneurism, treated by Reid's method[1] with Esmarch's bandage, have been, with few exceptions, instances of success and cure. It is not less important to place on record unsuccessful cases with equal care. I venture therefore to publish the history of one which seemed admirably suited for the application of the elastic ligature, but which ended in complete failure after repeated trial. The facts are these:—

G. C——, aged twenty-eight, a carman, accustomed to arduous toil, strong, active, healthy, with no history of inherited or acquired disease, first began to feel pain in the calf of the left leg, about the middle of last August. He rubbed it with oil for three weeks, until suddenly, on the night of Sept. 16th, the pain became worse, and rising on the morning of the 17th, he could not put his foot to the ground, and he felt a lump behind the knee. He came to St. Mary's Hospital at once, and, during the absence of Mr. Walton, was admitted under my care. A tumour, presenting the ordinary signs of aneurism, was found in the left popliteal space. It was somewhat ovoid in shape, lay for the most part in the lower half of the ham, and was most distinctly to be felt at the inner side. The circumference of the limb measured 14⅜ in., as against 11 in. of the right leg. The house-surgeon, Mr. Prowse, applied a tourniquet on the thigh to control the pulsation, but the pain produced by pressure was so great that in two days the instrument had to be removed.

On Sept. 21st, the limb having been bandaged above and below, but not over, the tumour, with the elastic bandage, and the tumour having been filled to the full by hanging down the leg, Esmarch's tube was placed round the upper part of the thigh. This done, the aneurism was at once gently, yet thoroughly, manipulated. Pain in the limb became so intolerable that in twenty-five minutes chloroform had to be given. The bandage and ligature were kept on for an hour and a half, and before removing them a tourniquet was placed on the femoral to control, though not arrest, the circulation. The tumour now seemed to different observers decidedly firmer, and the communication of pulsation to be more distant from the finger than before. In the evening the man complained that he had no sensation in the limb. It was generally œdematous, pitting everywhere on pressure. On the following morning the tourniquet was removed, and the aneurism, though feeling firmer, beat much as before. The œdema had passed away by Sept. 23rd, and warmth and sensation were again natural. The patient was ordered to take much less fluid.

On Sept. 26th the tumour felt firmer, and there was less violence and expansion in pulsation. On this day the bandage and tube were again applied for one hour, the tourniquet being placed on the femoral at their removal. The application was followed by a marked change in the nature of the pulsation; it could with great difficulty be felt, was only just visible, and there was an entire absence of expansion. The aneurism felt decidedly firmer. Six hours after there was no change in this state, and the prospect of cure seemed more hopeful. The next afternoon, however (Sept. 27th), when the tourniquet was removed, the pulsation had again resumed its original character. There was no pain, sensation in the limb was perfect, and there was but very trifling œdema. On October 2nd Mr. Lane agreed with me in thinking the tumour smaller, firmer, and less expansile. On Oct. 3rd the application of Esmarch was again repeated for an hour, and was followed by a good deal of ecchymosis about the knee and heel. The aneurism once more felt firmer, but on Oct. 4th, when the tourniquet was removed on account of pain, the pulsation was in every respect more decided than on Oct. 2nd. This activity did not again subside. At one point the tumour began markedly to increase, became softer, and more violent in pulsation. I therefore, on Oct. 10th, tied the femoral above the sartorius, using carbolised catgut and antiseptic precautions. The catgut was only of medium size, being the largest and best at the time in the hospital, and on tightening the first half of the knot the ligature broke. Another was therefore passed round the vessel and secured. The wound healed in its deeper parts by first intention, and there was little or no constitutional disturbance. The skin wound was alone rather slow in union. The aneurism consolidated, and the man left the hospital on Dec. 12th, his long stay after operation having been rendered necessary by stiffness of the knee.

Thinking it probable that some lamination of fibrine had taken place, and that in this, as in the successful cases, the obliteration of the aneurismal sac, already begun, might be merely completed by coagulation of the stagnant blood, it seemed not unreasonable to expect that clotting, even if failing the first time, might be brought about when further natural lamination had occurred. Coagulation, moreover, might be rendered more sure by manipulation. The form of procedure was that brought under the notice of the profession

[1] THE LANCET, vol. ii. 1875, p. 448.

by Mr. Oliver Pemberton in his Address in Surgery at Birmingham, the object being to "alter the relations of the laminated fibrine to the cavity of the aneurism so as to bring about a further deposition of fibrine on the projecting surfaces of the displaced laminæ." This process must in no way be confounded with that more violent form of manipulation originated by Sir William Fergusson, and which consists in forcible detachment of some portion of the fibrinous laminæ wherewith to plug the main vessel on the distal side of the disease. Although there is a vast difference between blood moving and blood at rest around displaced laminæ, I was not without hope that in the treatment by stagnation such manipulation might be of service. Of its utility in the cure of an aneurism in Hunter's canal I had had previous experience. The case has never been published in detail, but is referred to by Mr. Holmes in his lectures at the College of Surgeons with this comment: "As the aneurism was increasing rapidly up to the date of the manipulations, as those manipulations produced a most decided effect, and as they were followed by the precise train of phenomena which were sought to be obtained, I have no hesitation myself in regarding this as a case of cure by manipulation." Successful in that case, it must not be concluded that *manipulation* failed in this, for the circumstances of treatment were by no means the same.

Of the cases of popliteal aneurism cured by Reid's method, two, Mr. Reid's own and Mr. Wagstaffe's, have already been examined post mortem. Shown at the Pathological Society on Nov. 6th,[2] the sac of Mr. Wagstaffe's aneurism was seen to be filled by a clot of uniform consistence throughout, the popliteal artery for two or three inches contiguous to it being plugged by a well-organised thrombus; and in Mr. Reid's case the condition of the clot, both in sac and artery, was not dissimilar.[3] With these specimens only before us, it is early perhaps to assume that *cure* has in every case been brought about by occluding the artery, and not by occluding the aneurism—an explanation which has recently been put forward in a letter on Mr. Wagstaffe's case by Mr. Gould.[4] The method of bandaging above and below the sac must, in all probability, leave blood stagnant in a certain length of the artery as well as in the aneurism; and if clotting take place in the one, there is no apparent reason why it should not also at the same time occur in the other. Unless, however, the collateral circulation has been established with extraordinary rapidity, it is worthy of remark that plugging of the main vessel of the limb, an act not without its perils, should have been uniformly unattended by ill results.

As pointed out by Mr. Smith,[5] the conditions which appear to have most conduced to success in the published cases are—complete arrest of circulation in the limb, full distension of the aneurismal sac with blood, and stoppage of the circulation for a time sufficient to allow the blood to coagulate. The failure in the case here recorded must be due, I am inclined to think, to the stagnation of blood not having been kept up for an adequate length of time. Where the blood in one case may coagulate in fifty minutes, in another a much longer time may be required. Manifold conditions may lead to the clotting of blood, but we know how variable is the tendency to it in the ordinary and natural processes of the cure of aneurism by lamination, and we cannot put aside the behaviour of so important an element as the blood itself in this particular line of treatment. The different results of the same treatment in many cases presenting like signs and features tell the uncertainty with which the blood, as regards coagulability, conducts itself in aneurismal cavities.

The deligation of the vessel with two ligatures, instead of one, might, without catgut and antiseptic dressings, have given rise to some anxiety. Nor was any alarm likely to be lessened by the paper which Mr. Bryant read at the Clinical Society[6] on Oct. 12th, before my patient was out of bed. We may not know the precise conditions which determine the solubility of the animal ligature in living tissues, but, notwithstanding the accidents which have happened by ulceration at the site of ligature, and from cutting through of all the arterial coats by too forcible ligation, it has yet to be shown, I think, that carbolised catgut, with antiseptic precautions, is not in the long run the safest material with which to tie a vessel in its continuity.

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[2] THE LANCET, vol. ii. 1877, p. 689.
[3] Ibid., vol. ii. 1876, p. 184.
[4] Ibid., vol. ii. 1877, p. 707.
[5] Ibid., vol. i. 1877, p. 750.
[6] Ibid., vol. ii. 1877, p. 574.

ON THE OCCURRENCE OF COLLAPSE, EMPHYSEMA, AND DESTRUCTIVE PNEUMONIA IN ASSOCIATION WITH TUMOURS COMPRESSING THE BRONCHI.

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THE subjects named in the above heading seem to be of enough clinical and pathological importance to justify their detailed consideration. I shall come to some conclusions thereon which will depend on cases which have come under my own observation, and on an examination of several clinical reports, made without reference directly to these subjects, by many trustworthy observers. First of all I ask attention to a case of mediastinal tumour, not only because it bears directly on the purposes of this paper, but because also of its general interest.

A woman (widow, aged fifty-eight) came as an out-patient to Charing-cross Hospital in September, 1876, from which time she was under my observation up to the date of her death, Jan. 7th, 1877. When first seen she complained of various symptoms which had distressed her for about nine months, but chiefly of dyspnœa and debility, and of loss of flesh, which she attributed to poor living and hard work. Her family history was good, and she was the mother of several healthy children. She had always been steady, though her work was casual and laborious, and was a very intelligent, trustworthy woman. In September her chest was examined, and there was found a slight sense of resistance below the right clavicle near the sternum; while, hard, firm, and triangular in shape, a lump ascended in the neck an inch and a half above the clavicle. Nothing further could be detected except marked emphysema of the right lung in particular. She had the look of one who had suffered long from emphysema; but this appearance taken with the tumour in the neck led to the suspicion of mediastinal growth. Ammonia and bark relieved her for some time; but in October she had a severe bronchitis, during which râles obscured all other auscultatory signs. She quickly recovered and stayed away from hospital until the middle of November, when she again suffered greatly from dyspnœa, cough, and general sense of failure. The tumour in the neck had undergone no change; it was possible to insinuate the fingers between it and the clavicle, and the further it was felt below, the wider its base seemed—a fact of great diagnostic importance. The veins of the neck were greatly enlarged, especially on the right, where the anterior jugular was very prominent, particularly in coughing. The voice was more or less shrill, but the physical signs were unchanged. Beyond the resistance under the sterno-clavicular articulation, as deep percussion as could be borne could not detect any signs of tumour in the mediastinum. Hyper-resonance prevailed over the front and in the back, and dry bronchial rhonchi were as abundant as in a case of spasmodic asthma. The woman preferred to continue her occupation, and under the use of tonics and antispasmodics, varied from time to time slightly, gained relief and improved remarkably. She valued most a mixture containing moderate doses of sulphuric ether, sulphate of magnesia, sulphuric acid, and gentian infusion. She gained flesh, as determined by actual weighings, became more cheerful, and the suspicion of malignant mediastinal growth was diminished. In the third week of December these favourable symptoms ceased; she came complaining of an indescribable sense of constriction about the larynx, and on Dec. 28th she was suffering from severe dyspnœa, aggravated by the least exertion, from decided wheezing and interruption of speech, but she complained of cough only after direct questioning. She had a worn and weary look; her face was drawn and pale, her lips livid. On examination, absolute dulness with great resistance was found passing from the lump in the neck downwards to the cardiac dulness. It extended on the right from a line drawn from an inch outside the sterno-clavicular articulation to the fifth right cartilage, but to the left only reached the edge of the sternum. The right clavicular regions moved less than the

left, and there was now loud stridulous inspiration over the inner end of the first rib and downward to the third space on the right. Loud mucous râles accompanied the stridor, which was limited to a small area, and did not exist on the left side. In the back the breathing was much more feeble on the right side than the left; air seemed scarcely to enter the apices, over which distant stridor could be heard. The right base moved less than the left, but was still hyper-resonant. The patient refused admission, but on Jan. 4th, 1877, requested it. Her condition was more than critical, her dyspnœa was excessive, and her prostration on the least exertion extreme. She was at once sent into the ward, under Dr. Pollock's care, by whose kindness I had an opportunity of watching the progress of the case. Her back, after she had rested with advantage for some time, was examined, and no dulness was found at the bases. Shortly afterwards the bad symptoms increased suddenly, and she died asphyxiated on Jan. 7th, no regular examination of the chest being possible after the 5th, because of her condition. Observations of temperature were casual and infrequent, and therefore of little value; it varied from subnormal to a moderate degree of fever (97° to 100·5° F.)

On section of the upper thoracic cartilages on the right side at the post-mortem examination, clear serous fluid at once escaped. The right pleura was full of such, there not being the least trace of lymph in it, or any adhesions or other change in the serous membranes. A nodulated growth, looking like a chain of enlarged glands, occupied the mediastinum; it invaded the parietal pericardium, on which were two tumours the size of large walnuts, and so surrounded the great vessels of the thorax that these tunneled through a hard, unyielding mass. The aorta was constricted immediately below the innominate, the descending cava was narrowed by the growth, and the left innominate vein was almost completely obliterated. All the structures had been invaded more or less, and the right internal jugular was almost twice the size of the left, while the right anterior jugular was as big as an ordinary internal jugular. The growth in the neck was continuous with the mediastinal. The right vagus was buried beneath it in the neck, as was also the inferior cervical ganglion, which had, however, not been compressed. In the thorax the right vagus could be traced only with difficulty, while the left was embedded, from its entrance, in the external tissues of the tumours. The recurrent laryngeals were, of course, also involved, and their stretching sufficiently explained the voice changes. The left nerves were more stretched than the right. The lungs were directly affected by the growth, which had so invaded the bronchi that when the roots of the lungs were grasped a hard, big tumour could be felt. The right bronchus suffered most; there was, indeed, no compression of the left bronchus, but the right was grown into, narrowed, and distorted by the tumour. In the angle of bifurcation the glands were enlarged. The right lung was collapsed, the collapse being evidently recent. The upper lobe was most airless, but both it and the lower lobes gave one the notion of emphysematous lung from which all air could not be driven. Complete inflation was possible, and the lung was then found to be decidedly emphysematous. The left lung was emphysematous, and not collapsed. Numerous tubercular-like nodules were found on the right diaphragmatic pleura, and the lymphatics at the root of the right lung were large and easily traced. On the under surface of the right lobe of the liver was an umbilicated tumour the size of a walnut, and a few bodies the size of a bean were found in its substance. Disseminated flattened tumours in the walls of the intestines completed the morbid signs. In all the growths there was found microscopically a cancerous element of the scirrho-encephaloid variety, the tumour in the liver being almost typically scirrhous. The thoracic walls were firm and unyielding, and their cartilages more or less completely ossified.

It would have been difficult to diagnose a mediastinal tumour in this case, had it not grown into the neck, because emphysema was decided enough to obscure its existence, and in cases where emphysema is so manifest it is not usual to look for deep-seated tumours. I mention this because I shall attempt to show that emphysema of one lung in particular may be an early sign of mediastinal tumour, and that, in fact, for a long period, the true disease may be discovered by it. In this particular case, superficial dulness suddenly developed in the upper part of the sternum and right front (where emphysema had been decided) towards the end of the illness. Soon afterwards the dulness on the right became more general, and post mortem was found a mediastinal tumour not compressing the lung directly, with collapse of the upper lobe of the right lung, effusion into the pleura and partial collapse of the lower lobe. The vagi were more or less involved in the tumour, the left especially being stretched in the thorax. The right bronchus was invaded greatly by the tumour; the left was but little impeded; and in association with these signs of pressure there had occurred—(1) a gradual emphysema of the lungs, especially of the right lung; (2) a sudden collapse of the upper lobe of the right lung; and (3) a sudden hydrothorax on the right side, with collapse (from compression?) of the lower lobes. The case illustrates the occurrence of emphysema and also of collapse where the bronchus has been compressed from without.

The results of pressure at the roots of the lungs have received less attention than their clinical and pathological importance demands. In Ziemssen's Cyclopædia an article is devoted to stenosis of the air-passages (Riegel); but no regular explanation is attempted of the anatomical results. In 1859 Sir William Gull (Guy's Hospital Reports) described a "Destructive Pneumonia" in association with pressure by growths at the roots of the lungs, and attributed it to compression of the pulmonary plexus. The entire correctness of this view I shall presume to question, and show by examples that a vast destructive process follows the mechanical effects of direct compression and obstruction of the bronchi themselves. I shall also try to show that great emphysema may be due to the same, and also extensive collapse of a lung. No distinct account of these occurrences has been attempted. Riegel (*loc. cit.*) enumerates the anatomical changes in stenosis: "Dilatation of the bronchial twigs beyond—a bronchiectasis favoured chiefly by severe cough; emphysematous expansion of different sections of lung, not infrequently a result of direct stenosis; and in other cases atelectasis of portions of lung." Riegel does not state the fact, but twenty years ago Dr. Walshe mentioned each one of these *localised* phenomena in connexion with bronchial stenosis; and he declared that where the obstruction is of slow growth, cough and pain are not severe, and dyspnœa not greater than may be due to other conditions. I can find nowhere the statement that lobar emphysema of great extent may follow stenosis of bronchi due to outside pressure. Dr. Walshe asserts that entire collapse is entailed by obstruction of the main tube, but adds that he has not been able to satisfy himself clinically, by loss of resonance, &c., that this has occurred. In the Transactions of the Pathological Society, and elsewhere, are many cases bearing on the several changes, but no attempt is made to explain them. It is nowhere stated that emphysema is the primary effect of bronchial stenosis, that collapse may be secondary to it, or that a whole lung may be completely destroyed by simple compression of its bronchus. It is worthy of notice, also, that, contrary to Riegel's experience, cough in the latter change is far from severe, and certainly not enough to explain bronchiectasis. In two cases of destructive pneumonia, to which allusion is made later on, little cough occurred, and was attributable to bronchitis in the opposite lung. Possibly the absence of cough on the side of vast disease is due to the dulled sensibility of the mucous membrane beyond the stenosis.

In the discussion of pressure by mediastinal growths, I leave out of consideration those which directly compress lung-tissue by their large size. It is interesting to note, however, that, as a rule, airlessness is the simple result of such invasion, and that destructive processes do not occur, nothing more than is met with in chronic pleuritic effusion, which, according to some observers, is deemed conservative—in phthisis, for example. Nor do I propose to dwell on the effects caused by extension of tumours to pleuræ &c., or the pleuro-pneumonia which follows such extension immediately; nor, again, on those cases where an aneurism has partially compressed a bronchus and ruptured into it, or where "apoplexy of the lung" occurs, an excellent example of which is given by Mr. Pick (Trans. Path., vol. xviii.) Such cases do not come under the category I wish to discuss, even if death, as usually happens, does not quickly follow from hæmorrhage.

(To be continued.)

TRINITY COLLEGE, DUBLIN.—The authorities of this University are making application for a licence for the Medical School under the Vivisection Act, to enable such demonstrations to be given as may be considered essential o medical teaching.

THE ARTIFICIAL PRODUCTION OF HUMAN DISEASES IN THE LOWER ANIMALS.

BY W. LAUDER LINDSAY, M.D., F.R.S.E.,
PHYSICIAN TO THE MURRAY ROYAL INSTITUTION, PERTH.

(Continued from p. 381.)

A CONTRIBUTOR to the *Pall Mall Gazette* of Nov. 5th, 1877, p. 10, says: "We ourselves believe that rabies is often induced by want of fresh air and sufficient exercise, and it is quite in consonance with this theory that dogs so attacked are in the first instance those which have lived in densely populated towns."

The same writer, probably,[1] goes on to point out the folly of jumping to the conclusion that every dog which exhibits eccentricity of conduct must necessarily be mad in the sense that it is rabietic: "A crowd gathers round a dog suspected of madness, and they begin by teasing the devoted animal on every side. If he attempt to stand upon the defensive and bite, then he is unanimously found guilty, for a mad dog snaps at everything. If, on the contrary, he strives to escape by running away, then he can expect no compassion, for mad dogs always run straight forward"—that is to say, popular opinion avers that they do so; in short, it is a foregone conclusion in such cases that the dog is not only mad, but rabietic; while the madness, of whatever nature, if it do sooner or later exist, is produced by the injudicious or cruel treatment to which the poor animal is subjected.

Such a case naturally leads to a consideration of the parallel one of cattle being driven to market through the crowded streets of our large cities, which in similar fashion become "mad"; and a study of the mental condition of so-called "mad" bulls or oxen cannot fail to bring out the fact that cannot be too prominently made public—viz., that this and other forms of animal madness belong to the category, not of rabies, but of acute ephemeral mania—that is, to one of the phases of what is known as insanity in man. I have already elsewhere said so much on the subject of animal insanity, and especially of those forms of it which are popularly confounded with or mistaken for rabies,[2] that I do not propose recapitulating any of my own views or results here. But the subject is one of great public importance, for two reasons at least—viz.: (1) that rabies, both in man and other animals, is invariably attended with morbid mental phenomena of a kind or degree generally described in men as insanity; while (2) the causes productive of rabies or its insanity in the lower animals are equally productive of other forms of insanity, and of diseases of the brain and nervous system that are not necessarily accompanied by prominent mental symptoms. Hence it is desirable to cite one or two examples of the kind of cases of ephemeral mania in oxen that are so frequently met with in our streets, the records or narratives of which furnish the subject of so many "sensation" articles in our newspapers.

In June, 1871, a "mad" bull or bullock gave rise to considerable excitement in some of the leading streets of Glasgow. As usual in such cases, different accounts were given of the incident in the newspapers; and these accounts, while sometimes apparently contradictory in details, required to be read together in order to a due understanding of the whole circumstances. According to the first account I read of the animal's strange doings, and of the still stranger doings of the crowd which its behaviour attracted, "a bull broke loose from its confinement in the cattle-market, ... causing immense and general consternation in its wild career, and doing considerable harm to unfortunate pedestrians. The behaviour and shouts of the crowd that followed it inflamed the brute to madness, until it rushed headlong at every person whom it saw in the street."[3] In the second report, under the heading "Mad bullock shot in the street," it is stated that the animal got accidentally separated from a number of other young bullocks that were being driven along the Gallowgate. "A large crowd soon collected, and the shouting of the people and the ill-directed efforts made to capture the animal speedily inflamed it to madness." By some of the alarmed populace it was then first shot in the eye. "The only effect of the wound seemed to be to increase the rage of the animal. It charged a number of people who had taken refuge within the enclosures [in George-square], breaking the strong iron railing with the fury of its onset." It was now shot a second time, then hamstrung by means of a sword, and lastly "despatched in the orthodox fashion,"[4] whatever that is. A third narrative, supplementary to the others, and criticising or correcting them, written by a cattle-drover,[5] who gave his name, and who complained of the unnecessary "sensation" produced both in the streets and newspapers by what was, or might have been but for the senseless and mischievous hue and cry of "Mad bull!", a commonplace incident connected with a harmless animal, alleges that the latter was "a fine fat ox—in fact, one of the best that stood in the market..... It was so fat it could not run, and no person would have been hurt had they kept out of its way. ..... The shooting did not harm it, as no ball went within six inches of the brain, though the firing was at five and ten yards distance! W—— was running about with a sword, but neither he nor his sword was ever near the animal. After the poor animal was shot blind, ten or twelve men got hold of the beast and forced it to the ground; its throat was then cut with a pocket knife. It died in a few minutes from loss of blood."

This is one of the best typical instances I have met with, and I have notes of many, of the so-called "madness" of domestic cattle. In this case, if there was madness at all, it was of the nature of ephemeral mania, not of rabies—one of the features of the mania being that kind of "running-a-muck," with which we are familiar in the intoxicated or insane Malay. Whether or not the mental excitement amounted to mania, it was obviously produced from mere bewilderment by the injudicious behaviour of the Glasgow populace. The mode of termination of the animal's career furnishes a suggestive illustration of man's overhastiness and stupidity in sacrificing animals that would be quite harmless if they were simply let alone. "Mad" bulls or cows are by some people, and at some seasons, dreaded as much as mad dogs; but while, in nine cases out of ten, both species of animals are really innocuous if not interfered with, the absence of the propensity to bite in the bulkier animal, its less activity or agility, and its less familiarity with man, impart a greater relative degree of danger—apparent or real—to the reputed madness of the dog than to that of the ox. Mania and rabies, Youatt assures us, are constantly being confounded, and maniacal dogs have frequently been killed by shooting or strychnine, under mere suspicion of rabies.

The horse-stealers of Normandy, according to Pierquin, were wont to produce panic in horses by irritating their nostrils with certain chemical irritants. The same authority describes what he calls a "somnolent" insanity as producible in various animals, as in man, by hypnotics; and in the case of that caused by mephitic gases the form assumed is sometimes mania, in which the propensity to bite is so marked, that he speaks of this phase of mental aberration as a "biting fury," developed equally in man, the horse, and dog. The Imahman's arrow-poison, which is compound, being made up of the milky juice of Euphorbia arborescens, of the juice of the bulb of Amaryllis toxicaria, and of various snake poisons, produces the same effect on the lion that it does on man, a self-mutilating acute mania. The milky juice of the same Euphorbia is very fatal to zebras, when it is mixed with the water of ponds; but it does not kill men or oxen, acting in them only as a drastic purgative.[6]

On the other hand, confinement, in menagerie monkeys, is apt to engender melancholia through its various shades of graveness, sadness, apathy, moroseness, despondency (e.g., in the Capuchin: Cassell). Associated with melancholia, or giving rise to it, nostalgia not unfrequently occurs in the gorilla and other quadrumana sent to this country for exhibition purposes.

What Houzeau calls "waking" delirium is producible in the horse and ox by anæsthetics and intoxicants, as well as by fevers, overwork, exhaustion or fatigue, want of sleep, hunger and thirst, excessive heat or cold, and all kinds of provocation and sufferings. Protraction or continued opera-

[1] In the Pall Mall Gazette of November 6th, 1877, p. 5.

[2] (1) "The Pathology of Mind in the Lower Animals," Journal of Mental Science, April, 1877; (2) "Madness in Animals," ibid., July, 1871; (3) "Insanity in the Lower Animals," Brit. and For. Medico-Chirurg. Review, July, 1871.

[3] Daily Review (Edinburgh), June 23rd, 1871.

[4] Daily Herald (Glasgow), June 23rd, 1871.

[5] Ibid., June 24th, 1871.

[6] Brown's Races of Mankind, vol ii p 294.

tion of the cause, whatever its nature, may transform delirium into mania or other form of insanity. Pierquin, too, speaks of delirium as artificially induced by narcotics or stimulants.

The Indians of the Amazon pluck the feathers from the back and shoulders of a certain species of parrot in order that those which replace them may be made yellow or red instead of green. The desired change of colour is produced by the use of annatto. "The parrots whose plumage has thus been artificially changed are ever after silent, melancholy, and of very weak health."[7] It does not appear, in such cases, whether the alteration in the animal's disposition and health is due to the mutilation or to some poisonous effect of the annatto—to its chemical action and blood-poisoning thereby, or to both mutilation and blood-poisoning. Other forms of mutilation, however, produce mental symptoms of a still more decided kind, as well as accidents still more serious in their issue. "If an hymenopterous insect," says Jesse,[8] "is deprived of one of its antennæ, or if one of them only is a little injured, it appears to lose its senses, hurries about in extreme agitation, and comes to an untimely end."

Pierquin gives a long list of plants capable of producing, in man's hands, *insanity* in the lower animals; and he adds the following mineral or other matters which, according to him, may give rise to similar effects: viz., certain rancid oils; concentrated acids; alkalies and alkaline salts; various salts of arsenic, antimony, mercury, lead, bismuth, iron, zinc, copper, tin, silver, and gold. Recent instances have been recorded of the effect on the mind of certain animals—in the production, for instance, of infuriation or mania—of some of these substances. Thus Belt, Kennedy, and others have reported the remarkable effect of corrosive sublimate on certain ants.[9] But, as a whole, these assertions of Pierquin—made so long ago as 1839—require confirmation. The actions he describes are, in several cases at least, problematical: for instance, the alleged production of erotomania in birds fed on hemp-seed, buck-wheat, and fenugreek. He points out that a sort of joyous delirium (or mania) may be produced in some animals by the administration of alcohol in certain of its different forms; and we are quite prepared to be told, also, that it is producible by laughing gas (nitrous oxide). But that sulphuretted hydrogen (privy gas) and other mephitic gases give rise to it is an assertion that we cannot accept without some satisfactory evidence or proof.

Torture to frenzy—in other words, the production of a condition of fury or ferocity bordering on, if not amounting to, acute (ephemeral) mania, was common in the Coliseum of ancient Rome,[10] as it is in the arenas of modern Spain. And it need scarcely be added here that torture by man is not confined to the use of the goad, spur, or whip; it is simply infinite in the variety of form in which it is applied. All kinds of teazing, tormenting, irritating, tantalising, persecuting certain animals—all kinds of provocation especially that are persistent, deliberate, malicious—are almost certain, in the first place, to give rise to viciousness, and, in the second, to a fury that quickly passes sometimes into what Pierquin calls a murderous mania (or monomania), of which destruction of life, human or other, is a characteristic; in other words, man's mal-usage of other animals, especially those that are his domestic drudges, is a visible, intelligible, or appreciable and direct cause in them of serious mental disturbance. And the results of man's ill-usage are not the less serious because it seldom arises in order to the mere gratification of a love of cruelty or of witnessing animal suffering. It may be unintentional, springing from ignorance or thoughtlessness, and in one sense the perpetrator may be regarded as innocent of offence. Nevertheless, even then, the mischief done may be irremediable and deplorable, involving too frequently the loss of human life. The mere unwitting interposition of obstacles to the gratification of the passions or appetites is as apt as in man to beget in irritable animals exasperation, fury, even mania.

A veterinary surgeon of Wolverhampton tells us: "I have always had a strong opinion that breeding in and in tends to produce madness in some form";[11] and it has been alleged by others, but without adequate evidence, that insanity is more frequent in artificially-bred animals. The relation of breed and breeding to disease is illustrated by the greater liability to disease in the pure Arabian as compared with the Bactrian camel, almost the only disease of the latter being an affection of the tongue, which leads to death by starvation.[12]

(To be continued.)

[7] Hartwig; Tropical World, p. 413. [8] Scenes of Country Life, p. 229.
[9] Vide my paper on the "Pathology of Mind in the Lower Animals," p. 39.
[10] The effects of the exhibition of red colours to bulls in the hands of the ancient Romans are as problematical, however, as they are in those of the modern Spaniards. The fury alleged to be so begotten is not, so far as I have been able to discover, attributable to the scarlet colour of the flags waved, but to irritants of a more direct kind. The proverbial effect of a red rag on a bull is, I believe, a popular fallacy. But I have ample evidence of the influence of other colours in the production of dangerous fury in horses and other animals, only as yet there is no proof that red is one of these colours. Colour idiosyncrasies, indeed, sometimes lead to suicidal mania, or they may amount to or become veritable monomanias.

[11] J. W. Hill in Land and Water for Jan. 6th, 1872.
[12] Wood, in his account of the Camels in the Zoological Gardens, London.

A CASE OF BLOODLESS TRACHEOTOMY.

BY DR. G. POINSOT.

[THIS case is an illustration of the advantages of the use of Paquelin's thermo-cautery in tracheotomy, to which we referred in a recent number of THE LANCET.]

On Jan. 23rd I was called to La Cresne by M. Lafforgue to see a boy, aged thirteen, suffering from croup, in whom the symptoms of obstruction to the entrance of air to the lungs were well marked. We decided that tracheotomy should be performed at once. The boy was very fat, and there was a large vein passing along the neck which would be necessarily divided in the operation. With the thermo-cautery, heated to a dull red colour, I made an incision in the median line, and by successive light touches with the point of the instrument I divided all the structures down to the trachea; this I opened with the knife. Up to this time, although the large vein noticed above was severed, not a drop of blood had been lost. The molten fat which filled the wound was readily removed with a sponge. Finding that the tubes I had with me were too large, I introduced simply the inner tube of the smallest of them. This attempt caused a very slight hæmorrhage. The patient lived for two and a half days, and then died asphyxiated from implication of the lungs by the disease. Although the case was not ultimately successful, it shows very strikingly the anti-hæmorrhagic property of this mode of procedure.

Bordeaux.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF CYSTIC SARCOMA OF THE POPLITEAL SPACE.

(Under the care of Mr. BERKELEY HILL.)

FOR these interesting notes we are indebted to Mr. A. J. Pepper, surgical registrar.

R. G——, aged twenty-six, a fireman, was admitted on Nov. 10th, 1877, with a swelling at the back of his left knee of eight months' duration; the only symptoms being a feeling of tension at the seat of the tumour and weakness in the joint. His health had been uninterruptedly good.

On admission the patient was a powerfully-built, robust-looking man, complaining of nothing but slight inconvenience from the swelling, as large as a cocoa-nut, in the left popliteal space. It was somewhat lobulated in outline, had a smooth surface, and was tense, elastic, and evidently fluctuating on flexing the knee-joint. Some of the cutaneous veins over and around it were slightly dilated from pressure. There was no abnormal heat in the part, nor tenderness on pressure; and there was no pulsation, direct or communicated. The beat of the anterior and posterior tibial arteries was weak, almost to extinction. The tumour, which was not translucent, could be slightly swayed from side to side, though it

evidently had a deep attachment in the ham. It did not greatly lessen in prominence when the knee was bent, but it was less tense. The lymphatic glands were not enlarged; the internal organs were healthy; the bones of the limb appeared normal in outline.

The diagnosis of aneurism was eliminated by the absence of pulsation, the age of the patient, and the good general health. There was nothing about the tumour to suggest abscess; and new growth was provisionally discarded, because no solid portion could be detected. The balance of evidence turned in favour of a greatly enlarged bursa; but as the case was doubtful, it was decided to take the patient into the theatre, tap the swelling, and, should necessity arise, proceed with further operation.

On Nov. 15th patient was put under ether, and Mr. Hill introduced a medium-sized trocar, when an ounce and a half of blood-stained serum escaped. The cannula then became plugged with a gelatinous material, which was examined microscopically at the time, and found to consist of small round and fusiform cells. Esmarch's bandage was applied, and Lister's carbolic spray having been turned on, a longitudinal incision was made over the face of the tumour, and the external saphenous nerve turned aside. On reflecting a layer of fascia, the internal popliteal nerve was seen crossing over the inner part. This was freed from its attachment to the cyst and hooked away, together with the plantar muscle. On attempting to separate the tumour from its deeper connexions, a number of small vessels were divided. In order to lessen the bulk of the tumour, an incision was made into the most prominent part, and about four ounces of bloody serous fluid evacuated, and a granular, cauliflower-looking growth connected with the inner surface of the cyst-wall was exposed; further dissection of the mass from its connexions was carried out. During this part of the operation a great number of vessels were divided and tied with catgut ligature; finally, the popliteal vein, with which the tumour was intimately connected, was wounded, and profuse bleeding took place on removing the bandage. The wound in the vein was tied with catgut without ligaturing the whole vessel, while the whole of the growth was removed. The popliteal artery could be seen pulsating at the lower part of the wound. A large drainage-tube was put in, and the edges of the incision brought together with carbolised silk sutures.

For five hours and a half after the operation, the limb was decidedly colder than the other, but after this time it regained, and for a short time exceeded, its normal heat. No œdema of the leg followed, and there was no detectable thrombosis in the femoro-popliteal vein. The urine was stained with carbolic acid on the second day, and the patient was much disturbed with restlessness, and had foul tongue and nausea, consequently the carbolic dressing was changed for boracic acid lotion. The temperature was 102·8° Fahr. on the second day, 103° on the third, normal on the fifteenth. A second rise of short duration occurred on the twentieth day (102°), soon after which it became normal, and continued so. The wound, from which bloody serum oozed copiously on the night of the operation, healed at the lower and upper parts, but at the centre a sinus always remained leading superficially upwards. This had once to be enlarged to let out some bagging of pus. Three weeks after the operation, the wound not having thoroughly closed, an increasing fulness of the popliteal space was detected, and a fortnight later a distinct swelling had formed over the upper part of the fibula. This got slowly larger until the patient requested to have his discharge, refusing to undergo any severe operation for the present, but promising to attend as an out-patient.

He left the hospital seven weeks after his admission, his general health being re-established to a great extent.

Microscopical sections of the growth showed it to consist of small round and fusiform-celled sarcoma growing from the wall of a cyst which thoroughly encapsuled it.

Remarks. — This case, as Mr. Hill pointed out, was interesting in several ways: (1) On account of difficulty in making a diagnosis. The tumour closely resembled the enlarged bursa of the ham, which occurs not unfrequently. It occupied exactly the same position, and, like the bursa, fluctuated readily when the fascia was relaxed. (2) The procedure necessary for removing the growth was full of hazard and difficulty, being practically a dissection of the popliteal space. On this account it has often been decided to amputate rather than attempt to enucleate a tumour springing from the floor of the space. Indeed, in this case also, had the patient consented to lose his limb, amputation might fairly have been preferred, seeing that, in addition to the danger of injuring the main vessels and nerves, there was also the probability that the tumour would grow again *in situ* at no distant time. Such seemed to be actually taking place when the patient was lost to observation. (3) The greatest interest attaches, however, to the fact that a wide gap made in the popliteal vein may be tied at the bottom of a large complex wound without including the whole calibre of the vessel. To judge from the further progress of the case, the vein continued pervious from first to last, and to this happy circumstance may be due the absence of gangrene. Such deep and intricate dissections are hardly possible without the aid of Esmarch's bandage, which controlled all hæmorrhage until the later stages of the operation, when it was necessary to loosen the bandage to ascertain what vessels had been wounded.

Other noteworthy marks in the case were—the early age of the patient, his florid health, the absence of visceral complications, and the rapid reappearance of the disease after the operation. These, when considered as a whole, constitute a fair representation of the clinical history of this disease in its earlier stages.

Jan. 29th, 1878. — Since this report was drawn up, the patient presented himself, three weeks after his leaving the hospital. The swelling in the popliteal space had greatly diminished, and the sinus had nearly healed.

MANCHESTER ROYAL INFIRMARY.

SCALP WOUND; TETANUS; FREE ADMINISTRATION OF CHLORAL HYDRATE AND BROMIDE OF POTASSIUM; RECOVERY.

(Under the care of Mr. HEATH.)

FOR the following notes we are indebted to Mr. C. P. Mitchell, dresser.

William B——, aged forty-five, of strong constitution, was admitted on the 8th October, 1877, with an abrasion of the scalp, inflicted fourteen days previously. On examination he was found to be suffering from tetanus. There was marked trismus, with slight risus sardonicus. The muscles of the posterior region of the neck were rigid, and there were occasional tonic spasms with opisthotonos. The superficial wound on the scalp was covered by a thick scab, and was surrounded by a bright marginal redness. After the bowels had been freely opened by an enema of turpentine, twenty grains of chloral hydrate and twenty grains of bromide of potassium, were administered, and repeated every two hours for ten hours (five doses). On the following day the symptoms had somewhat abated, and the patient had slept continuously for several hours. Nine doses of the above combination in the same quantities were now given at lengthened and unequal intervals—namely, at four, twelve, fourteen, nine, three, eleven, seven, two, and four hours, and the effects carefully watched.

On the 11th of October, the fourth day after admission, his condition was as follows:—General stiffening of the whole trunk, partial trismus, inability to cough or sneeze in consequence of the contractions of the diaphragm, pain in the abdomen and thighs, a sensation of constriction about the throat, and indistinct articulation. Deglutition was easily performed, and the mental faculties were unimpaired. Temperature 98·4°; pulse 100, regular, full; tongue moist, furred; free perspiration; bowels constipated; urine normal.

The patient passed a quiet night, and felt easier next morning (12th). Forty grains only of last drug were given during the next thirty-one hours. At the end of this period there was a perceptible aggravation of the symptoms. This might perhaps be associated, not with the diminution in the quantity of the medicine, but with a sudden change in the atmospheric temperature which occurred about this time, the thermometer rising from 61° to 70° F. The quantity of the drugs was again decreased, and the intervals lengthened, fifty grains in fifty hours being given, but this reduction was again followed on the 14th by an exacerbation. The spasms, which were readily induced by contact, were now general and most pronounced, recurring every three or four minutes, and lasting about fifteen seconds. The patient suffered severe pain, and seemed greatly perturbed. Morning temperature 98°, evening 100·2°; pulse 132; profuse perspiration. It was now deemed advisable to increase the dose

to twenty grains every two hours. After the second dose the spasms had diminished both in frequency and intensity, and the patient was much relieved.

On the 16th, having had ninety grains of each drug during the preceding fourteen hours, and being strongly under the influence of chloral, as indicated by the dilated pupils, the weak irregular pulse, and cold extremities, the medicine was administered in half doses—viz., ten grains of each every two hours. He slept during the night, and was semi-comatose in the morning. The pupils on the 17th were dilated, but responded to light. The extremities were cold, the spasms had subsided, but the rigidity in the back and neck persisted. Temperature, morning 97°, evening 97·5°; pulse 90 to 100, irregular, feeble, compressible; respiration 20 to 22, shallow.

He remained in this state until the 21st, when the medicine was still further decreased to seven grains and a half every two hours. On the 22nd this trifling change in the medicine was followed by a correlative change in the condition of the patient, the tetanic symptoms being overtly augmented. A reversion was consequently made to the previous dosage, and by the 26th all the signs of tetanus had disappeared. Still the drugs were given at extended intervals. On the 28th the medicine was entirely discontinued.

At this stage an examination of the urine was made for the presence of chloroform with negative results. It presented no morbid conditions. The following notes of his condition were taken on Oct. 29th:—"This morning the patient exhibits unfavourable symptoms; there is total loss of consciousness, muttering delirium, and subsultus tendinum; the pupils are dilated, but sensitive; the tongue is dry and covered with a thick brown fur; sordes about the mouth. Morning temperature 100°, evening 103°; pulse 130, irregular, throbbing; respiration 40, hurried; evacuations involuntary." Strong coffee was ordered every hour.

On the 31st there was a faint improvement; during the next nine days the somnolence, hebitude, and delirium slowly passed away, and the temperature assumed the normal.

On the 17th of November the patient was declared free from danger. His restoration to health, which occupied several weeks, was slow and tedious, but unretarded by relapse.

From the onset the patient was fed with large quantities of highly nutritious food, and the bowels were kept open by enemata.

Remarks.—It is incontestably proved by the case narrated above that chloral hydrate, when administered in sufficient doses, has the power of controlling tetanic spasm, and viewed with the cases recently reported, it may be added that the drug has curative properties. The great point of interest in the case is the invariable relation between the diminution in the quantity of the medicine administered and the return of the spasms: when the dose was decreased the disease asserted itself; it could, however, be easily checked by keeping the patient under the influence of the chloral (1550 grains of the latter with the same quantity of the bromide were in all administered). At one time the medicine was pushed to such an extent as to produce symptoms of poisoning, which quickly disappeared when the drug was discontinued. At no time was there any difficulty in swallowing; the patient was therefore able to partake freely of fluid nourishment. This, undoubtedly, greatly favoured the happy termination of the case.

ST. PETER'S PORT HOSPITAL, GUERNSEY.

COLLECTION OF PUS BETWEEN THE SKULL AND DURA MATER; TREPHINING; DEATH ON THE SEVENTH DAY.

(Under the care of Dr. AIKMAN.)

WM. P——, aged forty-six, an habitual drunkard, was first seen at his home on Jan. 13th, 1878. He had had epileptiform convulsions for three days, and had great difficulty in walking, but no actual paralysis. The following history was obtained:—On the 28th of November he received, in some unexplained way, a scalp wound. On the next morning he walked to the hospital, and Mr. E. K. Corbin, under whose care he was placed, detained him in the hospital until the 24th of December, when he was discharged, with the wound nearly healed. After this date he walked to the hospital to fetch the necessary dressings once or twice a week, his last visit being on the 8th of January. On the 10th his first convulsion occurred, and then the convulsions continued without intermission until the 13th, when he was seen. He had excruciating pain in the head, and a very hazy idea of what he was talking about.

A sinus, leading down to bare bone, and an irregularity which was supposed to be a fracture, existed below the right parietal protuberance, while a large sac of pus separated the scalp from the bare bone to a distance of two inches and a half downwards and forwards. Counter openings were made, and the man ordered to be removed to hospital.

During the forenoon of the 14th he reached the hospital, and at 3 P.M. Dr. Francis Carey, the consulting surgeon, met Dr. Aikman to consider the question of trephining. The patient having been put under chloroform, the flap of loosened scalp was reflected, and a large surface of dead and eroded bone exposed. The irregularity, which resembled a fracture, was not in reality such, but a fissured fracture was found near the posterior angle of the right parietal bone. The exposed bone was not only dead, but had the greenish-yellow appearance described by Mr. Erichsen as characteristic of pus between the bone and dura mater. The trephine was accordingly applied near the lower margin of the exposed portion. As soon as the bone was completely cut through, horribly offensive pus welled slowly through the incision. When the circlet was removed it was found that in the upper and posterior third of the circle the dura mater was comparatively healthy, while the main cavity of the abscess lay below and in front. A piece of lint having been introduced in this direction to keep the membranes out of the way, a further circlet was removed intersecting the lower and anterior fourth of the previous one. The cavity was thus freely exposed. There seemed no hope of rendering the sac antiseptic, but to ameliorate matters as far as possible it was syringed forcibly in all directions with a watery solution of carbolic acid, of the strength of 1 in 60. After this, drainage-tubing was passed in all directions, and a sponge soaked in the same solution guarded the trephine openings. A poultice was placed over all.

Soon after the man recovered consciousness, he expressed himself as feeling "in heaven." He said he had not been so free from pain for weeks, and that now he had lost the double vision which he had had for some time. This symptom had not been suspected, though his pupils had at times seemed very slightly different in size. He now stated that for several weeks he had felt as though he "lived in a different world to other people," but that now it was all gone, and he was most profuse in his gratitude. At 9 P.M. he was very comfortable. Pulse 104; temperature 101·4°; and he wished for food. He had had no convulsions.

Jan. 15th.—10 A.M: Temperature 103·2°; pulse 124, weak and irregular; tongue very foul; bowels not been moved for three days. Vomited suddenly, and without nausea, early this morning. Had pain this morning in the wound and its neighbourhood, which was relieved on removing the drainage tubes; their use was therefore discontinued. To have a black draught.—8 P.M.: Temperature 103·4°; pulse 104. Bowels have acted well; no pain in wound.

16th.—10 A.M.: Has had a very good night. Pulse 104; temperature 101·4°; respiration 42. Is quite comfortable. The odour from the wound is less putrid. Since the removal of the drainage-tube the dura mater has been gently pushed back, and the cavity syringed out with the carbolic-acid solution at each dressing, but there is very little pus. The tongue is rather cleaner.—8 P.M.: Temperature 105°; pulse 124; respiration 44. Is very uneasy, and has had repeated shiverings.

17th.—10 A.M.: Has had a good night. Pulse 96, steady; temperature 100·2°; respiration 44. The respiration is not satisfactory, but why it is difficult to say. He takes food well, but complains much of pain over all his body. There is no evidence of suppuration in the joints.—9 P.M.: Pulse 96; temperature 101°; respiration 50. But for his rapid respiration he would be quite comfortable.

18th.—10 A.M.: Has had a restless night, but is pretty comfortable this morning. Pulse 96, but with three or four intermissions per minute; temperature 101°; respiration 70. Chest good. The patient sat up in bed of his own accord when the examination of the front of his chest was completed, to allow of his back being examined.—9 P.M.: Pulse steady at 104; temperature 101°; respiration 36. Is fairly comfortable. Bowels loose.

19th. — 10 A.M.: Is jaundiced this morning, and seems collapsed. Pulse 108, very small; temperature 101°; respiration irregular and panting. Has had some further shivering, and the bowels act frequently and without his knowledge. Tongue dry and brown. No sign of suppuration in the joints. — 9 P.M.: Pulse 126, and feeble. Is evidently moribund.

20th.—2 A.M.: Died quietly.

Remarks.—There can be no doubt as to the advisability of operation in this case, and there can be little doubt that the patient died from purulent infection. It is to be feared that the seeds of this infection were laid before the pus was evacuated. The symptoms for which the operation was performed never recurred, but there was no attempt at repair. On the day of his death the cut edges of the scalp were as fresh as when the cuts were first made. It is curious that no pus existed at the seat of fracture, or in its immediate neighbourhood, and there was no pus within the dura mater, at least so far as could be ascertained without actually opening it. With less tried powers of repair than the patient possessed, it is unlikely that so large a mass of cranial bone could have been successfully exfoliated, but the case is interesting in so far as the diagnosis and immediate results of the operation are concerned.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

An Improved Scarpa's Shoe.—Removal of Port-wine Mark by Scarification.—Action of Malaria.

AT the ordinary meeting of this Society on the 18th inst., Mr. Erasmus Wilson, President, in the chair, a cordial vote of thanks, proposed by Mr. Allingham, and seconded by Mr. Adams, was given to the silver medalist, Dr. Godson, on his retirement from the office of hon. secretary, and to the other retiring members of the Council. Mr. Allingham then exhibited a specimen consisting of four inches of the lower end of the rectum which he had excised for epithelioma. He said that the operation was not comparable with colotomy, as it is undertaken under entirely different circumstances.

Mr. WM. ADAMS exhibited an Improved Form of Scarpa's Shoe for the treatment of talipes equino-varus and cases of relapsed varus. He considered the instrument generally in use to be admirably adapted to the treatment of talipes equinus, in which the deformity was one concerning only a single centre of motion—the ankle-joint. But in the more complex distortions, as equino-varus, varus, and severe valgus, the foot no longer moves, as a whole, from one common centre of motion, but in two portions, from two distinct centres—viz., the ankle-joint, and the transverse or medio-tarsal joint, in front of the astragalus and os calcis—a joint which partakes of a ball-and-socket character, allowing the anterior portion of the foot to be moved in various directions. In equino-varus and in varus this part of the foot is inverted, rotated inwards, and flexed; in some cases of valgus it is rotated outwards. To correct these varied distortions, Mr. Adams has had constructed, by Mr. Ernst, of Charlotte-street, Fitzroy-square, the improved instrument shown to the Society. The sole-plate is divided into two portions by a joint corresponding to the transverse tarsal joint, and the anterior portion can be moved in various directions by three cog-wheels, or rack and pinion movement, in the sole-plate, the movements corresponding to inversion, eversion, flexion, and anteversion.

Mr. BALMANNO SQUIRE read notes of two cases of Port-wine Mark, treated with a view to obliterating the mark without scar. The one case was that of a man aged thirty; the other that of a woman aged fifty-five. In both the port-wine mark was confined to its commonest situation—viz., the right half of the face; and in each case treatment was carried on long enough to produce nearly complete obliteration of the mark. Scarification was adopted in both cases by means of parallel incisions with a frozen scalpel, the skin also being frozen by means of the ether-spray; the cuts involved the entire thickness of the skin, and were made about one-sixteenth of an inch apart, and as soon as these had healed (within three or four days) a second set of parallel incisions was made obliquely to the direction of the first set; and so on with a series of operations. This procedure gradually resulted in the fading of the port-wine mark, and its final complete obliteration without leaving any scar. Mr. Squire showed drawings of these cases, and of an instrument he had devised (made for him by Messrs. Weiss) for executing a series of incisions at one stroke. It was a scalpel with sixteen parallel blades, placed so closely together that eighteen of them measured only half an inch across. He also described an apparatus, consisting of a number of parallel needles fixed in a plaster-of-paris handle, so that the handle contained thirty-six needle-points in the half inch square. These should only be heated to a black heat on their insertion into the skin, for if heated to redness they produced complete sloughing of the entire area of skin operated on.—The PRESIDENT (Prof. Erasmus Wilson) said that the operation was obviously as yet only in its infancy, but that the process of linear scarification as proposed by Mr. Squire appeared to him to promise good results. Certainly no other satisfactory mode of dealing with port-wine marks had as yet been proposed. — Mr. MALCOLM MORRIS stated that he had attempted an operation on a port-wine mark with the single scalpel as at first advocated by Mr. Squire, but had found difficulty in executing the incisions with the requisite nicety. He had accordingly devised a multiple scarifier, which he exhibited (made for him by Mr. Hawksley). He had tried this instrument on lupus erythematosus, and also on cases of acne rosacea. — Mr. WORDSWORTH agreed with Mr. Squire in preferring a black heat to a red heat in operating by the needle process. He had long employed—viz., for twenty years—in cases of port-wine mark, a solitary needle bearing a ball of steel around the needle placed at about three-sixteenths of an inch from the point so as to retain heat. This ball enabled a rapid series of punctures to be effected with the needle without the needle losing its heat.—Mr. DAVEY had treated a case of port-wine mark with some success on Mr. Wordsworth's plan.—Mr. B. SQUIRE replied that, in order to succeed in effecting neatly close parallel incisions, some practice in pencil or in pen-and-ink drawing was a considerable advantage, and that those practitioners who happened to have this kind of training would find but little difficulty in the matter. However, the multiple scarifier he had devised would effectually dispense with the necessity for that kind of accomplishment. He had tried multiple linear scarification in lupus, but preferred the results he had obtained in that disease by erasion with a minute sharp steel spoon. The spoon in such cases had also been tried with good results by Professor Auspitz and by Hebra junior. In the "telangiectasis" which often accompanies acne rosacea he had employed linear scarification as proposed by himself with better results than the multiple punctiform scarification recommended in such cases by Hebra senior. Professor Vidal, of Paris, had recently adopted Mr. Squire's method of linear scarification in cases of lupus vulgaris, with apparently good results. Dr. Dubini (of Italy) and after him Professor Volckmann (of Halle) had proposed multiple punctiform scarification in cases of lupus vulgaris, but no one, so far as could be ascertained, had proposed the bolder method of linear scarification in lesions of the skin, and this was more uniform and more thorough in its effect. Moreover scarification of any kind as applied to port-wine mark was, he believed, as yet untrodden ground.

Dr. SULLIVAN then read a paper on the action of malaria on the human organism. He advocates the theory that to nerve paralysis, through the action of this poison, must be attributed, not alone the phenomena manifested during a paroxysm, but also the sequel of the intermittent fever. Dr. Sullivan availed himself of the occasion to expound the views of Professor Baccelli, of the University of Rome, on "the influence of malaria on the spleen." He explained, by means of a diagram, copied from one of Baccelli's, the special venous circulation between the spleen, stomach, pancreas, and liver, together with the peculiar function of the spleen destined to supply to the glands of the stomach the materials necessary for their secretion. He therefore concludes that whatever tends, like the poison of malaria, to impair the function or the texture of the spleen (an organ which, as a part of the lymphatic apparatus, acts so important a part in the formation of the blood and in the process of nutrition), must affect greatly the function of digestion.

OBSTETRICAL SOCIETY OF LONDON.

New Form of Metrotome.—Fibro-cystic Disease of Uterus.—Uterine Injection Tubes.—Unicorned Uterus.—Traction by the Lower Jaw.—Use of the Forceps.

AT the meeting on the 6th inst. (Dr. Charles West, President, in the chair), the following gentlemen were elected Fellows:—Henry Allen Aldred, M.D.; Frederick Stephen Alford, M.R.C.S.; Walter Edward Husband, M.R.C.S.; and John Archibald Lorimer, L.R.C.P. (Farnham).

Dr. GALABIN showed a modified form of Dr. Peaslee's Metrotome. The principle was the same as that applied in Civiale's urethrotome, and in that of Sir Henry Thompson. It was especially applicable for incision in cases of stenosis of the internal os, although it might be used for the external os. The advantage was that it divided both sides equally to an exact and very moderate extent; while Simpson's, or other similar metrotomes, were apt either to cut too deeply or, if the operator were timid, not deeply enough. It could also be introduced through a very small canal, while the single or double-bladed metrotomes were usually made larger than the ordinary sound, and could not be passed in the cases which most required incision. In the modified instrument the tube was made round instead of flat, which much facilitated its introduction. A spring was also introduced within the instrument, which prevented the blade sliding forward prematurely, and returned it after use.—Dr. AVELING had for many years used an instrument very similar to that shown by Dr. Galabin. As a rule he preferred metrotomes which cut only in one direction.

The report of Dr. Galabin and Dr. Herman on the Fibro-cystic Disease of Uterus, shown by Dr. Thomas Chambers at the last meeting of the Society, was then read, together with Dr. Chambers's account of the subsequent history of the case and of the post-mortem examination. Sections of the tumour under the microscope were also exhibited by Dr. Galabin. These showed its structure to be that of a fibro-myoma, having very numerous and wide interspaces between the bundles of fibres. The subsequent history of the case, as given by Dr. Chambers, told that the patient died twenty-six hours after the operation. At the autopsy the bladder was found to be very much elongated, and appeared to have been drawn upwards, as by the ascent of the tumour, so as to form a cone-shaped cavity, the cone being involved with the tumour so intimately as to escape recognition during the operation. The result was the ensnaring of a small piece of the cone or fundus in the ligature which embraced the whole stump. Although the bladder was not inflamed, it was but fair to suppose that the injury it sustained contributed greatly to the result.

Dr. HAYES showed a new form of Tube which he had devised for the Injection of the Uterus, after Labour or Abortion, with a solution of Condy's fluid, or other disinfectant, and also for what was now becoming a favourite measure, the injection of hot water. The advantages he claimed for this tube over others were its non-flexibility, its increased length, enabling it to reach the fundus easily, and the number of perforations in its extremity, so that the fluid was discharged into the uterus in the form of spray, which ensured the whole of the uterine cavity becoming bathed by the fluid.—Dr. ROGERS had a precisely similar tube made for him twenty years ago. It was constructed of the same metal, and was perforated in the same way.—Dr. CLEVELAND had never heard of the short tubes condemned by Dr. Hayes being used for injecting the uterus. They were only intended for washing out the vagina.—Dr. MURRAY thought that the tube for intrauterine injection should have large apertures in preference to small ones, which were very liable to become clogged up. He had used for many years a vulcanite tube of the same length as that shown by Dr. Hayes; in accordance with the view he had expressed, it had large apertures.

Dr. FANCOURT BARNES exhibited some Vulcanite Tubes, which had been devised by Dr. Robert Barnes, for injection of the Uterus with solution of perchloride of iron after abortion. They contained pieces of sponge soaked with the solution, which was made to ooze slowly out through eyelet holes at the end of the tube by means of a piston. The alleged danger of forcing the fluid through the Fallopian tubes into the peritoneal cavity was thereby obviated.

Dr. HERMAN exhibited a specimen of a Unicorned Uterus, and read the following description:—The uterus lay close to the right pelvic wall. The right Fallopian tube and ligaments were short, but otherwise normal. The left ovary was high up on the left side, near the internal abdominal ring. The left canal of Nuck was very large, and a thick fibrous band proceeded from the ovary down this canal. The end of this band presented an enlargement, which was more vascular than the rest. A thin but firm and strong fibrous cord, between two and three inches in length, united the ovary to the upper part of the rectum. On the surface of the pelvic peritoneum a flat band of slightly diverging fibres could be seen running from the cervix uteri in the direction of the left ovary. Both ovaries showed signs of having discharged ova. The patient was unmarried, and aged forty-nine. It was stated by her sister that she had ceased to menstruate for three years, that the flow had always been scanty, and that she never complained of pain. She died from capillary bronchitis.

Dr. MATTHEWS DUNCAN contributed a paper on "Traction by the Lower Jaw in Head-last Cases." He commenced by saying that by the traction referred to two objects were professed to be gained—flexion of the head and extraction. Attempts to secure these objects by the fingers applied to the fossæ caninæ were in vain, because the force in a right direction available by such procedure was of too small amount. Besides traction by the lower jaw, there were two other sources of power: first, pulling by the feet or otherwise through the spine; this was the paramount force. Second, expression, which by mere strength of the accoucheur's arm might be estimated as from 30 lb. to 40 lb., or, using the weight of the accoucheur's body, might reach 100 lb. The dangers attending spinal pulling and expression were very considerable. Those of the latter method were as yet but little known. Danger in head-last cases, when the base of the skull was in the brim of the pelvis, was not from compression of the cord, but from asphyxia and from inhalation of solid and fluid matters into the lungs. Speedy delivery was often desirable, and lower-jaw traction deserved consideration when there was obstruction requiring the use of force, and when the other forces were not sufficient. Injuries resulted in two of Dr. Duncan's four experiments with lower-jaw traction. Separation of the two halves of the bone in one case, in which fifty-eight pounds were suspended on it; and laceration of the inside of the mouth, with dislocation, in another. The force applied through the lower jaw, acting as it did chiefly through the maxillary joints, was favourably applied for producing extraction, but not for producing flexion, because of the nearness of the joint to the centre of the head's motion, the bitemporal diameter (in a contracted brim). The whole force so applicable might be more than fifty-eight pounds, and might certainly all be used in cases of dead children, or children certainly doomed to death, or in cases where the head was left in the uterus. Further experience was required to show how much could be safely used on a living fœtus. Lower-jaw traction did not produce considerable flexion of the head. Flexional efforts are seldom required. The paramount dragging by the spine, as it acted in a case of contracted brim behind the centre of the head's motion, annulled or undid any slight flexion produced by the lower-jaw traction. But spinal pulling could easily be made to produce flexion after the head's passage of the brim, by giving it a proper direction; and at this time flexion is essential.—The PRESIDENT said that years ago he used to practise and to teach the drawing down of the head by applying the fingers of one hand to the canine fossæ, and pressing up the occiput with the other hand. But we now learnt from Dr. Duncan that it was not possible to achieve much by this method, nor, indeed, did it appear from his paper that we were able to do much more by traction on the lower jaw.—Dr. FANCOURT BARNES, stated with regard to the application of the forceps to the after-coming head, that he had practised the operation on the phantom, repeatedly, and had found it remarkably easy.—The PRESIDENT said that it had always appeared to him one of the great disadvantages of the use of the phantom that operations upon it seemed so uncommonly easy, and he

had always hesitated to draw conclusions from these operations to those on living women.—In reply to the President's previous remarks, Dr. MATTHEWS DUNCAN said that he had particularly pointed out in his paper that the method of Smellie, that of traction with the fingers in the fossæ caninæ, and simultaneous pressure upwards on the occiput, was an efficient and valuable method of delivery in head-last cases.—Dr. PLAYFAIR said that of late years he had been much impressed with the great advantage of the expression of the head from above in these cases, in that it could be performed in union with traction.—Dr. CLEVELAND said that it was pleasing to learn that one might justifiably use such a large amount of force as mentioned by Dr. Duncan without doing any material damage. There still, however, remained one want—a means of determining what muscular force one was putting forth. How, he would ask, was the operator to know that he was using a force not exceeding fifty pounds?—Dr. ROPER pointed out that the conditions present in different cases of head-last delivery varied very much. There was a great difference between the cases in which the head was delayed above the brim and those in which it was only delayed in the cavity of the pelvis. He believed that where podalic version had been effected as an alternative to craniotomy the life of the child was often lost from the head being delayed at the brim of the pelvis.—Dr. BRAXTON HICKS felt that there was considerable difficulty in discussing Dr. Duncan's paper; for the author had not attempted to treat the whole question of the delivery of the after-coming head. Had he done so, he would probably have advocated a combination of traction on chin and neck, and pushing up the occiput, combined with pressure from above, a plan which he had adopted and taught many years. But the point dealt with by Dr. Duncan was quite different from this general question, and consisted in the determination of how much force might be safely used in a particular direction.—Dr. WYNN WILLIAMS thought it well to point out that a living muscle, as regarded its resistance to tension, was under very different conditions from a dead muscle. He did not believe that a living child could safely bear the same force that could be applied with impunity to a dead child. The active resistance of a living muscle made it much more liable to injury than a dead muscle. He believed that much injury was often done by undue traction being made to deliver the after-coming head.—Dr. CLEMENT GODSON said that he had been much struck during Dr. Duncan's experiments with the small amount of force necessary to deliver the after-coming head of an unusually large child on a phantom pelvis with a conjugate diameter of three inches, and the question occurred to him whether the soft parts did not interfere with delivery very much more materially than was generally imagined. He could not agree with Dr. Duncan in regarding with disfavour the application of forceps in head-last deliveries.—The PRESIDENT pointed out that it was much easier to apply the forceps to the after-coming head when the patient was delivered in what he might call the Continental position, where she lay on her back. Here it was possible to secure ample space for the use of the forceps by drawing the body of the child well forward towards the abdomen of the mother.—Dr. MURRAY agreed with the President as to position making some difference, but he had nevertheless applied the forceps in two cases with complete success, though the patient remained in the ordinary position, and he considered that the use of the forceps was indicated sooner rather than later in the delivery of the after-coming head when difficulty arose.—Dr. JOHN WILLIAMS said that he had several times applied the forceps to the after-coming head, and with the greatest facility. In the last case of this kind which he had seen, he had found it impossible to deliver by any other means.—Mr. COCKELL urged the importance of sweeping the body of the child round towards the mother's abdomen before applying the forceps.

Dr. GEORGE ROPER related a case of Protracted Labour in which the use of the forceps was typically indicated. The case occurred in October last in a woman, aged forty, who had had thirteen previous labours at full term, all of them severe. On being called to the case by a midwife, Dr. Roper found that delivery had taken place naturally, except for the use of ergot, which had been given seventeen hours after the rupture of the membranes, the os being fully dilated. The drug was speedily followed by very severe and frequent pains, and delivery ensued in two and a half hours. The child, a male, weighing nine pounds and a half, was stillborn, and its appearance indicated that it had very recently died in its birth. The head was of very large size, and the ossification of the cranial bones was so complete that the fontanelles and sutures were nearly obliterated. Another interesting point was that the vault of the cranium was twisted on the base, so that the measurement from the left mastoid process of the temporal bone to the posterior superior angle of the right parietal was much greater than a corresponding line drawn between the same points on the opposite sides of the head. This lateral obliquity was probably to be explained by the severe pressure the left side of the vertex had to sustain against the rami of the left ischium and pubis in the rotation of the head; the corresponding area of the right side of the vertex being exposed to no obstacle, but having the expanse of the pubic arch before it became elongated. In his comment on this case, Dr. Roper observed that he felt strongly that whenever it was determined to use forceps, the operator should be able plainly to state the indication pointing to the necessity of its use. In the present case there were, apart from the death of the child, many indications of necessity. (1) Accidental discharge of liquor amnii at the very beginning of labour. (2) A woman, aged forty, whose many previous hard labours had enfeebled the uterine force. (3) Great fatness, especially of the abdominal walls, and a weakened state of the abdominal muscles. (4) A large and hardly ossified head to be felt during labour. (5) Three hours of slow progression in the second stage of labour in a woman who had had twelve living children. Dr. Roper thought it could be scarcely doubted that if forceps had been used an hour before the ergot had been given, the mother would have been delivered with much less suffering, and of a living child.—Dr. WILTSHIRE called the attention of the fellows to the cast of the normal child, as well illustrating what he might call the natural asymmetry of the fœtal head. The cast was very well adapted for this purpose, as, the child being delivered by the feet, the head had not undergone much compression during delivery. The two halves of the head might be equal in bulk, though he doubted whether this were so; but in sixty per cent. of the cases which he had examined, the right half of the head was in a plane a little in advance of the left half. This asymmetry affected not only the cranial bones proper, but also the arch of the palate. His own observations had convinced him that it was independent of any compression to which the head might have been exposed during delivery, for it was seen in children delivered by Cæsarean section.

The meeting then adjourned.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At the February meeting, R. H. Meade, Esq., President, in the chair, a paper was read by Dr. RABAGLIATI on the Function of the Chorda Tympani Branch of the Facial Nerve, in which he adduced evidence, physiological, anatomical, and pathological, to show that this branch is probably a nerve of taste for the anterior two-thirds of the tongue. This was followed by an important paper by Dr. BELL, upon "Wool-Sorter's Disease," of which the following is an abstract:—The occupation of wool-sorting was considered a healthy one. About forty years ago, however, mohair and alpaca were introduced into this trade. After a few years it was noticed that sudden and unaccountable deaths took place among the men engaged in this department, and a suspicion arose. As the trade developed, these sudden deaths became so frequent as to convert the suspicion into a certainty that something was wrong, and to create great uneasiness among the workmen. Masters and men were equally anxious to understand and prevent the disease. Eminent medical and scientific men were consulted, post-mortem examinations and reports were made again and again, but the nature and the cause of the disease were not satisfactorily explained. Dr. Bell detailed cases of the disease, and then said the symptoms of a typical case might be summarised as follows:—No rigor, thirst, pain, vomiting, nor purging; very slight cough; no expectoration; quick breathing, great exhaustion, weak rapid pulse, mind clear, extremities cold, perspiration clammy, gradually decreasing temperature, death in fifteen

to twenty-four hours. The medical man is usually at a loss to account for the death. It is commonly set down to one or other of the following causes: heart disease, perforation of stomach, spasm of glottis, pulmonary embolism, aneurism, &c. As to the cause, the first theory is—(*A*) that it is due to the inhalation of the fine dust and short hairs which are thrown off in the process of sorting. Against this theory Dr. Bell adduces the following objections:—(1) Sorters do not appear to suffer more than others from bronchial irritation; (2) other dusty employments produce chronic, not acute, diseases of the lungs; (3) microscopical and chemical analyses demonstrate no difference between alpaca, goat, and camel hair from other non-injurious hairs sufficient to account for the different effects produced; (4) the removal of the greater portion of the dust by means of large fans has not diminished the frequency of the disease; (5) it is highly improbable that simple mechanical irritation could give rise to these sudden deaths. (*B*) The second theory is that the disease may be due to peculiar poisonous properties acquired from infectious diseases of the animals themselves, of other animals, or of persons with whom they have been in contact. The reply to this is—(*a*) with respect to animals, the only disease affecting them in any way resembling the sorter's disease is pleuro-pneumonia; but (1) it does not affect sheep, and therefore probably not goats nor alpacas; (2) it is always more chronic in its course; (3) it does not affect man. (*b*) With respect to persons, there are sudden deaths of people in the highlands of Peru and Armenia, but they differ from more than they resemble the wool-sorter's disease. (*C*) Dr. Bell's theory is, that the disease is septicæmia due to the inhalation of a septic poison produced by the decomposition of animal matter in damaged bales. Dr. Bell was led to this conclusion by the analogy of the wool-sorter's disease to the sudden deaths due to specific organic poisons, such as small-pox, scarlatina, &c., the analogues observed being (1) exposure to infection, (2) a period of incubation, (3) the stage of collapse, (4) the stage of reaction, (5) the development of local congestions. It differs as follows: (1) it is not a ferment poison, (2) it does not reproduce itself in the living body, (3) it is not a product of a diseased body. The objections to this theory are: (1) the disease does not attack workers among the skin and hides shipped from the same ports, nor men employed about tanneries; to this Dr. Bell replies that the virulence of the poison in this case is diminished by exposure to air, water, and time. (2) If the theory were true there would be other milder cases which recover, and the reply is that such is the fact. (3) Wool from sheep in the same counties ought to produce the same effects. To which Dr. Bell replies—(1) sheep are generally washed before clipping, goats seldom, and alpacas never. (2) In the wool of the sheep there is a natural soap present, which suspends and renders innocuous the dangerous materials; but this is absent in the case of goats and alpacas. Prevention: (1) Greater care should be expended in packing to keep out suspicious fleeces, or to disinfect them. (2) The bales on being opened out ought to be exposed for twenty-four hours to air, heat, or other disinfecting agents.—A general discussion followed the reading of the paper, in which Messrs. and Drs. Bronner, Thomas, Foster, Aston, Mossop, Rabagliati, Goyder, and the President took part. General unanimity with Dr. Bell's conclusions was expressed, and illustrative cases were cited.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — The annual meeting of this Society was held on Feb. 27th, at 8 P.M.; A. Prichard, Esq., President, in the chair. The officers for the session 1878–79 were elected—viz.: President, Dr. H. Fripp; President-elect, Mr. W. Mitchell Clarke; Secretary, Dr. R. Shingleton Smith; Committee, Drs. Brittan, W. J. Fyffe, and Spencer, and Messrs. Coe, Dobson, Griffiths, Lansdown, A. Prichard, and Tibbits. — Dr. FYFFE gave an account of the uses of Surgeon-Major Porter's Sawdust Pads. —Mr. JOHN EWENS described a case of Spina Bifida successfully treated by Iodo-Glycerine Injection. — Dr. E. L. FOX gave a contribution to the pathology of Tetanus. He described the various pathological phenomena observed in the nerve-centres and in the peripheral nerves—lesions all of them the effect of the tetanic symptoms. Not only may tetanus exist without any of these lesions, but the abnormalities of the cord may exist without tetanus. Dr. Fox's belief is that none of the lesions yet found can be considered as in any way causes of tetanus; it is more likely that the blood itself is at fault. An inquiry into the nature of "colloid degeneration," as seen in the spinal cord, led Dr. Fox to the conclusion that this substance is a result of inflammation, or of hyperæmia just short of inflammation, and as such is also a secondary result of the spasm, rather than a cause of tetanus; he believes it to be a true degeneration of the neuroglia nuclei, and not a mere sero-albuminoid exudation.

Reviews and Notices of Books.

Transactions of the International Medical Congress of Philadelphia, 1876. Edited by JOHN ASHHURST, M.D. pp. 1145.

THIS handsome volume is the valuable outcome of the great International Medical Congress held in Philadelphia during the Centennial Anniversary of the Declaration of Independence by the United States in 1876, and contains much that is worthy of perusal, and that is interesting to all branches of the profession. The kind words of welcome by Professor Gross with which it opens were, we are sure, and still are, reciprocated by all who came from far and near to join in the proceedings of the Congress, and we in this country have in a special manner to be grateful to the Americans for the kind reception they gave to the representatives of our Societies, and the overwhelming attentions they bestowed upon them—attentions which, we fear, can only be very inadequately returned to the various Americans who visit this country. The volume is divided into ten sections—namely, addresses, and the several sections on Medicine, Biology, Surgery, Dermatology and Syphilography, Obstetrics, Ophthalmology, Otology, Sanitary Science, and lastly Mental Diseases. The various addresses strike us as having been written with great care, most of them dealing with their subject in an historical mode, as those of Austin Flint on Medicine, Eve on Surgery, Wormley on Medical Chemistry, and Parvin on Obstetrics; though some, as Gray on Mental Hygiene, and Bowditch on Preventive Medicine, contain much interesting information. It is impossible, amongst the numerous excellent essays contained in this work, to single out one or two without appearing to be invidious; but we may mention that we have read with pleasure and profit those of Dr. Woodward on Typho-malarial Fever; Denison on the Influence of High Altitudes on the Progress of Phthisis; Johnston on the Microscopy of the Blood, especially in its Medico-legal Relations; v. Buren on the Treatment of Aneurism; and Hewson on the Analgesic Effects of Rapid Breathing—a paper that deserves special attention, as it may perhaps prove serviceable in minor operations, if the statements of Dr. Hewson are corroborated by future observers. Other essays to which we may direct the attention of those who are interested in these branches of medicine are: White on Variations in Type and Prevalence of Skin Diseases, in which the distribution of cutaneous affections in America is interestingly given. Prurigo, such as is so frequently seen in the Vienna clinic, is wholly absent, or at least was not once met with in 10,000 cases, whilst it forms 3 per cent. of Hebra's cases. Lichen exudativus, ruber, and pellagra are almost equally rare. Erythema, lichen scrophulosorum, lupus, leprosy, phtheiriasis, scabies, tinea favosa, and alopecia areata, all appear to be less prevalent in America than in Europe. On the other hand, seborrhœa, acne, herpes, urticaria, and pruritus, or the affections of the glandular system, appear to be more prevalent. Bulkley, on the "Question whether eczema and psoriasis are local diseases of the skin or manifestations of constitutional disorders," which he answers in favour of the latter alternative. Bumstead on the "Unity or Duality of Venereal Sores," who on good grounds considers the virus to be dual; and, lastly, Enders on Leprosy in the Sandwich Islands, which he regards as in some way the offspring of syphilis. Syphilis

itself is discussed in two papers, one by Keyes and the other by Drysdale; whilst Dr. Engelsted gives a remarkably interesting account of the measures adopted in Denmark to prevent the spread of venereal disease.

The report of the section on Obstetrics contains several papers that have been very carefully worked up. Amongst the more important are those of Dr. W. H. Byford on the Causes and Treatment of Non-puerperal Hæmorrhages of the Womb, Dr. Goodell on the Mechanism of Natural and Artificial Labour in Narrow Pelves, Dr. Miner on Ovariotomy by Enucleation, Dr. Atlee on the Treatment of Fibroid Tumours of the Uterus, Dr. Lusk on Puerperal Fever, Dr. Fitch on Paracentesis, Aspiration, and Transfusion, and Dr. White on Chronic Inversion of the Uterus. The chief memoirs on Ophthalmic Diseases are those of Dr. H. W. Williams, in which he advocates astringents rather than caustics in the treatment of conjunctival disease; Dr. Knapp, who collects the various recorded cases of Tumours of the Optic Nerve, and adds two more to their number; Dr. Harlan on the Spontaneous Cure of Congenital Pulsating Exophthalmos; and Loring on Progressive Myopia and Conus. The progress of Aural Surgery is shown by the papers of Dr. Albert Buck (so well known as the able editor of the American translation of Ziemssen's Cyclopædia of Practical Medicine) on the Importance of the Treatment of Aural Diseases in their Early Stages, Dr. Burnett on the Best Means of Testing the Hearing, Dr. Spencer on the Function and Utility of Artificial Drum Membrane, and others by Drs. Jones and Blake. Five papers on Sanitary Science and four on Mental Diseases make up a total of no less than seventy original articles, many of which display great research, and which we strongly recommend all who are interested in the advance of particular branches of medicine and surgery to take an early opportunity of reading.

The editing has been very creditably performed by Dr. Ashhurst, and the volume is in all respects an acceptable one.

Chorea and Whooping-cough. Five Lectures. By OCTAVIUS STURGES, M.D. London: Smith, Elder, and Co. 1878.

THESE lectures were delivered at the Hospital for Sick Children and at the Westminster Hospital, and they are so well written that the perusal of them will give pleasure even to those readers who do not agree with the views put forward by the author. We cannot think that the views expressed in this volume with regard to these two common diseases in childhood are likely to be very generally accepted, nor do we consider that the arguments are adequately supported by facts. Dr. Sturges attempts to place chorea and whooping-cough in the category of functional diseases, and he denies that the one has any specific morbid anatomy, or that the other is due to the action of a specific poison. The value of the book lies in this, that the author points out how narrow, how almost imperceptible, is the line which divides physiological from morbid action. Chorea, in his eyes, is an exaggerated attack of "the fidgets," and this view is one which we must all, to some extent, admit. The author, however, does not seem to dwell sufficiently on the fact that chorea, like the fidgets, is only a symptom, and that we are bound to recognise that as "the fidgets" may be brought about by mental conditions; by external irritations, such as shirt collars; by internal irritations, such as undigested food, worms, or an overloaded rectum; by depressed conditions of health, and by alterations in the minute anatomy of our nerve-centres; so the symptom "chorea" may be due to many different conditions. We quite admit that the so-called explanations of chorea hitherto given are all of them highly unsatisfactory; but, on the other hand, we are not prepared to accept the view that all cases of chorea, inclusive of those which are complicated by cardiac lesions and death, are due merely to functional derangement.

Dr. Sturges, we think, attempts to prove too much in trying to maintain that whooping-cough is common catarrh to which a nervous trick is superadded. Dr. Sturges dwells, we think, too much upon the *whoop*—the nervous phenomenon,—and is too prone to regard this as the sole criterion of that disease which most of us regard as specific. We have all seen cases in which a child has had a catarrhal attack, accompanied by violent cough and expectoration, but without any whooping, and such cases we regard rightly as whooping-cough, and, as such, contagious. For our own part, we should be inclined to lay far more stress on the violent paroxysmal character of the cough, accompanied by expectoration and vomiting, than on the accident of "whooping." It is this latter phenomenon only that is capricious in its course and duration, while the former phenomena are tolerably constant. We do not believe that every child who has whooping inspiration is the subject of a specific disease, but, on the other hand, we feel tolerably sure that many children are infected with the poison of whooping-cough who themselves never emit any characteristic sound. We cannot enter at length into Dr. Sturges' arguments, and, although we rise from the perusal of his book by no means a convert to his views, we have found so much pleasant writing and thoughtfulness in his pages that we cordially recommend all who are interested in children's diseases to make themselves masters of what Dr. Sturges has to say upon chorea and whooping-cough.

The Question of Rest for Women during Menstruation. By MARY PUTNAM JACOBI, M.D.

THIS work obtained the Boylston Prize of the Harvard University for the year 1876. The subject of which it treats is one of the highest importance not only to women themselves, but to society also, and especially is this the case at this time, when innovations in theory and practice with regard to the position and occupation of women are being made. It should be stated that the work treats not simply of the necessity of rest during menstruation, but also of the broader question—capacity of women for work. The book begins with an introductory historical chapter, and with some general considerations with regard to labour. A statistical chapter follows, and against the method adopted by the authoress to obtain the data contained in this chapter we must protest as being thoroughly unscientific and untrustworthy. The plan was the following. A thousand circulars, upon which were sixteen questions, were issued, with request for answers. No signature was necessary. We protest against such a method, because the statements of patients, when made orally to questions, require the most careful sifting, and their value can be estimated only by a variety of circumstances occurring at the time, but which are entirely wanting when written answers are made. A brief sketch is then given of the most important theories and observations which have been made or received on the physiological and anatomical changes occurring in the generative organs during menstruation. Then follow the results of the daily estimation of urea, pulse, temperature, together with sphygmographic tracings of the pulse in the radial artery, in six persons, for one, two, or three months. The number of persons in which observations were made is too small to formulate any trustworthy conclusions from, but there appears to be a gradually increasing tension of the arterial system, beginning at a minimum soon after the cessation of a menstrual flow, and attaining a maximum during the week preceding the next menstruation. In the fifth chapter is propounded the "theory of supplemental nutrition," a theory which is put forward to explain the differences between the sexes. Essen-

tially it consists in this, that at puberty an arrest of the development of the motor system (muscles, bones, and motor nerve-centres) takes place in women, and that the surplus material is distributed not only to develop a new organ, but to supply a demand made by the performance of a new function, the reproductive—that is, the reproductive function is developed at the expense of the locomotor. It is, doubtless, a fact that the locomotor system is less developed in the human female than in the male, but it may be questioned whether this is due to the development of the reproductive organs and function at puberty. This theory implies a "primitive equality or identity of the sexes," an implication which can scarcely be justified, because at an early period they are just as indistinguishable to us as the ova of certain animals which, when developed, present the greatest differences. But were this implication justified we yet have no evidence that there is a relation between the less developed motor system and the greatly developed reproductive, for at birth there is a great difference between the sexes, while removal of the organs of generation both in male and female animals diminishes the development of the motor system; and cases are on record where the organs of generation remained undeveloped in the human female, and yet the development of the locomotor system did not approximate that of the male. The conclusion arrived at is that "there is nothing in the nature of menstruation to imply the necessity, or even the desirability, of rest for women whose condition is really normal," but that women are unfit for prolonged and severe application, and require frequent short intermissions in their work; that such intermissions are required at all times, and have no special regard to menstruation. In conjunction with this the author states that 46 per cent. (65 per cent. suffer in some degree) of all women suffer more or less with menstruation, and that "humanity dictates that rest from work during the period of pain should be afforded to them whenever practicable."

The work is much too theoretical, and the arguments are vitiated by the introduction of hypothetical data. Much might have been done had the opportunities offered by America and its institutions to solve the question under discussion been taken advantage of. This, however, was not done. The only new observations in the work are a record of the examination of urea, pulse, and temperature in a few cases. The work adds little or nothing to our previous knowledge. The practical conclusion we are led to after its perusal is that all women at all times are incapable of prolonged labour and application, that they require frequent short intervals of freedom from work, and that forty-six per cent.—nearly one-half—of all women suffer pain during menstruation, and demand rest at that time.

New Inventions.

COTTAGE HOSPITAL BED-REST.

MESSRS. HOOPER & CO., of Pall Mall, have produced a very convenient and cheap bed-rest, made in japanned and galvanised wire-work, which can be readily and perfectly cleansed and disinfected. For use in hospitals and among the poorer classes, as well as in private families, the apparatus will be of great value. The form and construction adopted render the bed-rest available for use among all classes, and not less acceptable to the wealthy than those to whom economy is a primary consideration.

SNARE FOR AURAL AND NASAL POLYPI.

MESSRS. SALT & SON, of Birmingham, have made, at the suggestion of Mr. T. H. Bartleet, surgeon to the General Hospital, Birmingham, a snare for aural and nasal polypi, which is an improvement on those at present employed. Those who are accustomed to the use of the polypus snare must have felt the inconvenience arising from the fact that the two movements commonly used—that is, the rapid one made by the fingers, or the slow one by the screw—can only be obtained by separate instruments. In Mr. Bartleet's snare the two movements are combined, so that the wire may be tightened by the fingers, working the cross bar, in order to find and grasp the polypus, and then by the milled button, which gives a slow or écraseur action. The apparatus is simple in use, and calculated to prove a valuable aid in the treatment of nasal and aural polypus. As in other similar instruments, the shaft is jointed, so as to act at any angle.

IMPROVED ALUMINIUM TELESCOPIC STETHOSCOPE,

WITH IVORY CHEST AND EAR PIECE.

THE same firm has constructed a light, elegant, and portable telescopic stethoscope, of good acoustic properties. The ear-piece is made either to unscrew or to move on a hinge placed at its junction with the stem. In the latter instrument, the ear-piece when in use can be kept firmly in position by means of a sliding tube. The stethoscope itself can be drawn out like a telescope to a length of six inches, and prevented from collapsing by means of a bayonet-lock.

SURGERY AT NEW YORK.

OUR correspondent at New York writes:—On the 19th of September last I witnessed the application of a ligature to the common iliac artery, by Professor A. B. Mott, at Bellevue Hospital. The patient was suffering from aneurism of the external iliac artery. The case terminated fatally on the 4th of October, fifteen days after the operation, from secondary hæmorrhage. This operation recalled the fact that it was fifty years ago—viz., March 15th, 1827—that the elder Mott applied the first ligature to this artery for aneurism. His case differed from the present only in its successful issue, the patient surviving at least a third of a century. It is interesting to notice some of the features of this half-century of ligations of the common iliac artery. The first and the last operations were performed by father and son, the first being successful, the latter fatal. Ten operations have been performed by New York surgeons, of which 9 were fatal, giving a mortality of 90 per cent. During the first twenty-five years of that half-century 25 operations were reported, with a mortality of 16, or 64 per cent.; during the last 25 years, 25 operations were also reported, with a mortality of 20, or 80 per cent. Of the total number (50) 36 proved fatal, or 72 per cent. These statistics are given from a note-book in which cases have been recorded as they have been met with in an extensive reading of current medical periodicals, and are not therefore complete, but there is no doubt that they closely approximate the truth. It is remarkable that the early operations were so much more successful than the later, the difference being 16 per cent. in favour of the former. The total mortality, 72 per cent., proves the operation to be very fatal.

The so-called open method of treatment of wounds, as practised at Bellevue Hospital, consists in washing the fresh amputation-wound with carbolic acid solution, inserting sutures in the upper part, placing the stump in such position as to secure free drainage, and the frequent application of Peruvian balsam to the entire surface of the wound. This practice evidently aims to disinfect the wound at first, and to secure it from infection afterwards. It is in no respect the open-air method as generally understood, and should not be referred to in that connexion, as has frequently happened during the past year.

The antiseptic system finds but few advocates in New York, but those who practise it are very enthusiastic. The reported results are most satisfactory, and in some instances quite astonishing, but surgeons generally discard the details and refuse to follow the prescribed rules. In general, however, antiseptics are used in some form in all operations.

THE LANCET.

LONDON: SATURDAY, MARCH 23, 1878.

BUT that we have long possessed the happiness of those who expect nothing in medical legislation, we should have been greatly disappointed at the provisions of the Bill introduced by the Duke of RICHMOND on Tuesday evening. A more weak-kneed piece of work, even in these days of attenuated and permissive law-making, has not been produced. One wonders how it has come about; or one would wonder if it were not known, as we pointed out last week, that all medical legislation is formulated, at the request of the Government, by the Medical Council—the body which most needs reform. The principal object of the Bill seems to be to create a new class of practitioners, something less than regularly educated medical men, to be called dentists, another class to be called and registered as midwives, and to admit women to the profession. We can imagine the distracted authorities of Lincoln's-inn saying to the President of the Council: "Now you have shown a friendly feeling to aspiring ladies at various times; do take them off our hands. You have had an Amending Bill on the stocks the last seven years; get the Government to take it up; leave out all compulsion; leave every "Body" to do as it likes; make no change except to admit foreign and colonial diplomas to a special register; assume the perfection of the Medical Council; construct thirty or forty clauses, and trust to the apathy of Parliament to believe that everything in medical legislation has been established on lasting and just foundations." Yet we venture to believe that even the Medical Council will be disappointed at the utter weakness of this measure. We had strong opinions of the way in which Government deals nowadays with great questions in what is called a tentative way. But we would not have believed it on any less authority than that of the Duke of RICHMOND that a Government would introduce a Medical Bill of over thirty clauses and stop short of compelling the examining bodies of the various divisions of the kingdom to join together to make a Conjoint Board for the kingdom. What is the use of legislation if it is not to compel that which everybody sees is the least that can be demanded, and which is certain not to be secured if the compulsory principle is not brought into action. The Duke of RICHMOND says that he hopes the Conjoint Scheme for England will be established before his Bill becomes law; and that there are provisions in his Bill under which the Scotch bodies *can* come in. But *will* they? or the Irish bodies either? What are the facts of the case? The facts are that they have had the power, the permission, to combine for the last twenty years. It is contained in the Bill of 1858. It is no use, as the Marquis of RIPON well pointed out, to merely repeat permissive legislation; to say the bodies can when we know they won't. We have had enough of this *can-ny* legislation. We want the work done now, and if the Duke of RICHMOND will not compel the creation of a Conjoint Board for examining and licensing the entrants into the profession, with a uniform severity, and at a uniform cost, he had far better leave the question alone. Another "permissive Bill" will do distinct harm. It will do harm in this way. The Scotch and Irish bodies know that public opinion is in favour of a unification or consolidation of medical licensing bodies. We will venture to say that they have been expecting to be compelled to this measure. If a strong Government hesitates to compel them they will gather courage from its hesitation, and will take it as a new lease for twenty more years to remain as they are. Not only does the Bill not compel the bodies to form Conjoint Boards, but it is doubtful whether, in the event of their doing so voluntarily, each body will not still be at liberty to continue to grant its own individual diploma, entitling to registration. If so, we shall have under the Bill not nineteen examining bodies, but twenty or twenty-one or two.

The Duke of RICHMOND made reference, on Tuesday night, to the Dental Bill. We would remind him of another Bill in the House of Commons—a very absurd one, as we think,—proposing to require every person who has passed any of the present medical licensing bodies to pass a new Medical Board before being qualified to undertake any civil medical appointment. This is a much severer condemnation of the existing Boards than is implied in the special examinations for the Army and Navy. But it shows the dissatisfaction with the existing system of medical examinations. We implore the Duke of RICHMOND to make his Bill more worthy of his Government, by putting an end to a state of matters which everybody feels is out of date. Legislative compulsion of a Conjoint Scheme alone can save the examining bodies from being reformed in the more thorough way in which, of late, we have heard of a legal Inn being reformed. We also urge upon all Medical Societies and Associations to lose no time in petitioning against another merely permissive piece of legislation.

THE beneficial influence of light on life and health is a fact which hardly needs reassertion. Every day's observation, subjective and objective, medical and lay, confirms its truth. But the evidence of the fact lies in vague, though strong, impression, rather than in definite observation. Even more vague and inexact are our ideas of the mechanism by which light is so potent a minister of Hygeia. As an addition to our knowledge of the subject, of much value and interest, we would call attention to a paper recently read before the Royal Society by Dr. A. DOWNES and Mr. T. BLUNT.

The problem especially discussed in the paper is a biological one, but it has hardly less interest to the physician than to the biologist. It is the influence of light on the development of those lower organisms which are just now engaging so much attention, and the life history of which is assuming such importance in connexion with the pathology of disease. The observations relate to the effect of light on the origin and development of bacteria, and have led to the remarkable and interesting conclusion that solutions otherwise fertile may be completely and permanently sterilised by the action of light alone.

The discovery is of such importance and interest that it is worth while to examine in detail the steps by which it

was ascertained. The demonstration of the fact was simple. A set of test tubes were filled with the same PASTEUR'S solution, and placed in identically the same conditions, with the exception that some were protected from light by being encased in sheet lead. All were placed outside a window with a south-east aspect. The experiment was made at midsummer, so that there was abundance of light. In the tubes protected from the light the liquid in a few days became turbid, the turbidity being due to the presence of numberless bacteria. The solution in the exposed tubes remained for several weeks perfectly clear, and under the microscope no organisms could be discovered. This experiment was repeated over and over again, and with almost uniform results. When, however, the amount of sunshine was small, the development of the bacteria was, sometimes, only retarded, not entirely prevented. The greater the amount of sunshine the greater the sterilising effect, and a few days of full sunshine were sufficient to prevent entirely the development of the bacteria. It was demonstrated, however, that the diffused light of a room had a similar, although less powerful, influence.

The first question which presents itself in connexion with this observation is this, Is the action of light upon the solution, or on germs, or germinal material, which it contains? Does light so change the liquid as to render it incapable of supporting bacterial life? It was found that a tube which had remained clear for many days, when inoculated from a bacterial fluid and darkened, soon became turbid and swarmed with bacteria. The action of light does not then appear to be on the liquid. If on the bacteria, is it capable of destroying bacteria? It was found that, if a tube was protected from subsequent contamination, it remained permanently sterile after exposure to sunlight, even though subsequently darkened. It is inferred from this that light destroys the germs or young bacteria. On subsequent inoculation the sterile solution soon presented numberless bacteria. Not only does light prevent the development of individual bacteria, but it appears to prevent the increase of those already formed, for it was found that of two tubes of PASTEUR'S solution rendered slightly turbid by bacterial inoculation, one exposed to light remained the same, while another, from which light was excluded, became rapidly more turbid, owing to an enormous increase in the bacteria.

It was found by a series of careful experiments that a certain amount of light is necessary to sterilise. Less than four hours' direct sunlight is insufficient to prevent the development of bacteria in inoculated solutions. The results, however, although approximately similar, were not identical, and are apparently liable to be influenced by some external conditions, notably temperature. Yet the putrefactive tendency of warmth does not override the preservative quality of light; and the experimenters found that, with a full amount of sunlight, tubes could be preserved continuously from day to day as readily in hot weather as in cold. It was ascertained, however, that the concentration or dilution of the PASTEUR'S solution influenced materially its resistance to the sterilising action of light. The stronger the solution the greater the ease with which it could be sterilised, and in a solution one-tenth of the strength of that employed in most of the experiments the growth of bacteria could not be prevented by sunlight.

This action of light was not confined to PASTEUR'S solution. Urine, it was found, could readily be preserved in the same manner. Tubes of urine were placed side by side, the one encased, the other exposed to the light. The former rapidly swarmed with bacteria; the latter remained quite free from them, even for months. It was noticed that prolonged exposure to sunlight had a bleaching effect on the urinary pigment. In turnip infusion the development of bacteria was greatly hindered, although it was not entirely prevented. Only a few motionless rods were found in an insolated infusion, while a similar infusion protected from light rapidly putrefied and presented large numbers of moving bacteria.

A very interesting fact was observed in the course of these experiments. It was found that the tubes sterilised by light frequently contained tufts of the mycelium of a fungus, the spores of which are apparently able to resist, to some extent, the germicidal influence of light. This mycelium did not, however, develop during the period of light-exposure. It was found that the spores of the yeast plant are even more hardy. Insolation had no apparent influence in retarding the growth of yeast, for the destruction of sugar by fermentation proceeded equally in exposed and encased tubes. There seems, indeed, to be a sort of antagonism between bacterial and fungoid growths. When bacteria appeared early and in large numbers, fungus-mycelium was rarely seen; whereas, when tubes were sterilised for bacteria, mycelium frequently appeared in them. The experiments suggest that this antagonism may explain, in part at least, the sparing distribution of bacteria in ordinary air, as compared with the spores of penicillium.

A series of very interesting but still incomplete experiments were instituted to ascertain the mechanism by which light acts. The first question was—With what rays of the spectrum is this action of light coincident? A series of tubes were protected by glass of different colours. It was found that bacteria appeared first in those protected by yellow, and in these almost as soon as when cased in lead; next in the red; while those in the blue remained permanently clear. The experiment points forcibly to the actinic rays of the spectrum as the active sterilising agents.

A very remarkable fact was discovered in investigating the effect of exhausting the air from the tubes previous to insolation. The removal of air was found by TYNDALL to sterilise PASTEUR'S solution effectually, and the explanation appears to be that the absence of oxygen is incompatible with the existence of the bacteria. So potent is the effect of the removal of oxygen that it was found that all experiments to ascertain the influence which removal of surrounding air had on these experiments on light failed when PASTEUR'S solution was employed. Urine, however, was discovered to be far less readily sterilised by a vacuum, and by employing urine the remarkable fact was discovered that in the absence of an atmosphere around the tubes, light exercises no sterilising influence whatever. Specimens of the same urine, insolated to the same degree, but preserved in vacuo, became turbid from bacteria as rapidly as others encased in lead.

The facts brought out in these researches are of the highest interest, scientific and practical. The discoverers of the effects we have been reviewing suggest that

many of the related conditions of organic beings may derive new meanings from the facts now ascertained, and point out the apparent antagonism in origin and effect between the coloured chlorophyll, which owes its origin to light, and is deoxidising in its action, and the colourless protoplasm which it shields, and to which, apparently, at least in some of its forms, the solar rays are not only non-essential, but devitalising and injurious. The observations afford also a new and intelligible basis for the well-known influence of light on health and for the association of darkness with disease. We live in a world of antagonistic forces and antagonistic forms. The higher organisms and the lower are at constant war, and the lower perish in the light in which the higher thrive.

THE recent case of the Rev. HENRY JOHN DODWELL, acquitted, upon the ground of insanity, of a charge of assault on the Master of the Rolls, affords a striking illustration of the extraordinary position in which the law still places the question of responsibility. The hypothesis that an accused person is "not guilty" of an offence actually committed rests entirely upon the assumption that he is, or was at the time of doing the deed, suffering under *disease*. The existence of disease of any kind must obviously be a medical question. This is admitted by the law, inasmuch as it commonly receives medical testimony on the point from witnesses who are able only to give a scientific opinion without being able to speak to facts in the particular cases before them. Nevertheless, the law empowers a lay jury to decide whether or not this disease—insanity—exists, with or without medical evidence. In short, the recognition of mental derangement is regarded in the same light, and placed on the same level, as the identification of handwriting or any similar issue of fact in relation to which the assistance of an "expert" may be obtained or dispensed with, as suits the convenience or shall be determined by the caprice of the parties concerned, or of the Court before which the issue is to be tried. This should be clearly and generally understood, because it constitutes, we venture to think, one of the conspicuous anomalies of our judicial system, the removal of which has been most unaccountably delayed.

Is insanity a disease? If it be not, why take the opinion of a medical expert upon the subject at all? It is only on the presumption that the question involved is *medical*, skilled testimony can be admitted. If this presumption holds good in one case, it must surely hold good in all, and, taking the narrowest technical view of the point on strictly legal grounds, a judgment formed without medical evidence must be bad in law, because incompetent. This argument places the issue in its broad aspect before the public, and it is upon the lines of plain reasoning it must be discussed. The medical profession contends that mental derangement in all its forms is essentially and always a *disease*, and that no lay jury or judge can be competent to perform the medical function of diagnosing the morbid condition, still less of deciding in what degree the will and self-control of a person affected with this disease have been unseated. The measure of irresponsibility in any instance must of course depend upon the extent of the malady. We do not think offenders should be wholly excused because they happen to be partially affected by disease. If that theory of justice were adopted great mischief could scarcely fail to result. Affliction would soon come to be commonly pleaded as an excuse for crime. A bad plea of this class is occasionally even now successful, and the reckless way in which a defence of this kind is sometimes supported by medical evidence complicates the difficulty encountered in the attempt to induce learned judges to take a reasonable view of the grave question involved.

Meanwhile, it is a scientific postulate of the rational argument in this matter that the extent of responsibility for a misdeed must be determined by the degree of self-control which could have been exercised. The attempt to measure responsibility by the knowledge of right and wrong to which jurists cling is no longer possible. Since the recognition of "moral insanity" as a distinct variety of mental disease, it is necessary to recognise that a person may know he is doing wrong, and yet be unable to resist the impulse to evil. The condition is *morbid*, and has nothing in common with the weak moral habit of yielding to "temptation"; it is more akin to the demoralisation which places a human creature in the position of an utter and helpless slave to mere animal passions. For the time the man or woman may be reduced to the level of a brute, and wholly swayed by brutish instincts or impulses. The will is paralysed, although the conscience may be awake. It is by no means certain that an act done in violation of judgment is performed unconsciously, even in cases where the deed is forgotten as soon as committed. Nor are the phenomena of this form of mental disease correspondent with that better known variety of derangement in which the offender acts under the recognised influence of a "delusion," as when he performs a supposed service of vengeance at the bidding of some imagined being or "power." The essential characteristic of "moral insanity," *properly so called*, would seem to be the inhibition of moral control, and the consequent self-assertion of brutish or purely animal instincts, which man possesses in common with the lower members of the creation, but which his higher nature, acting normally, enables him to control. The whole question involved is medical, and, we repeat, the degree of responsibility in any case can only be determined by a judgment trained in the investigation, and practised in the diagnosis, of mind disorder and disease.

It is a serious and alarming consideration that a lay tribunal must always be incompetent for, and may at any moment err fatally in, the recognition of insanity, sending a victim of disease to the gallows, or incarcerating a sane, though misguided and vain, man to a madhouse for life, in place of visiting his offence with an appropriate legal penalty. We protest against the position assumed by a court of criminal justice, and we trust the decision may be reviewed. We offer no opinion as to the question of fact in this case. There was no evidence upon which to found a judgment. It is to this omission we demur, and upon the grave defect which stands confessed on the record, we venture to think, a higher authority must proceed to amend.

THE Factory and Workshops Bill, as amended in Committee, has been printed and circulated, and we are enabled to lay before our readers a summary of this important measure,

which has now probably almost assumed its ultimate form. The Act is in four parts and 106 clauses, and covers, with its schedules, sixty-five pages of the official foolscap. By it sixteen previous Acts of Parliament are entirely repealed, and three others are in part repealed. It will at least, therefore, have the effect of making a knowledge of the laws affecting labour in factories far more easily attainable than hitherto has been the case. The first part of the Act has to do with the general law relating to factories and workshops, and by its various clauses it is sought to enact that all factories, as regards drainage, cubic space, and ventilation, shall be kept in a condition which shall be satisfactory to the medical officers of health, inspectors, and others working under the Local Government Board. There are certain clauses also having reference to safety and the regulations which should exist with regard to the fencing of machines &c. The regulations as to the hours of employment and meal hours are of great importance. They have reference only to young persons, women, and children, and for the purposes of the Act a child means a person under fourteen, a "young person" one between fourteen and eighteen, and a woman a woman of eighteen and upwards. Young persons and women are not to be employed in textile factories for periods of more than twelve hours, of which at least two shall be set aside for meals. The meal-times are to be fixed and regular, and "a young person or woman shall not be employed continuously for more than four hours and a half without an interval of at least half an hour for a meal."

Children are to be employed only on alternate days, or for half a day on successive days. If employed on alternate days, the days of employment are to vary in each successive week, and, if employed in mornings or in afternoons, the time of employment is to vary in each successive week. The object of this seems to be that the child who works half time shall, equally with the adult working whole time, get the benefit of the Saturday half-holiday which, as regards women and children, is provided for in the Act. The Act also provides that, in addition to the usual Saturday half-holiday, no work shall be done on Christmas Day and Good Friday, and at least eight other half days, or four whole days, in the course of the year. We are glad to notice that there are very stringent regulations for the prevention of any infringement of these holiday clauses. The parent of every child employed in a factory or workshop is compelled to see that the child attends some efficient school, either on alternate days or for half time on every successive day, according to the mode of employment of the child, and the owner or occupier of the factory is empowered to pay a fee to the school authorities of a sum not exceeding a twelfth part of the wages earned by the child, which sum may be deducted by the occupier from such wages. A child of the age of thirteen, who has attained a suitable standard of efficiency at school, may be regarded as a "young person." So far the Act seems to us to be very satisfactory, but we now approach a subject which we do not think will prove acceptable to the profession.

For every child or young person employed in a factory the occupier of the factory has to get a certificate of fitness in the prescribed form from the "certifying surgeon": "A certificate of fitness for employment for the purposes of this Act shall be granted by the certifying surgeon for the district, and shall be to the effect that he is satisfied by the production of a certificate of birth, or other sufficient evidence, that the person named in the certificate of fitness is of the age therein specified, and has been personally examined by him, and is not incapacitated by disease or bodily infirmity for working daily for the time allowed by law in the factory named in the certificate." "When a child becomes a 'young person' a fresh certificate of fitness must be obtained."

In case of accidents resulting in death, the certifying surgeon may be called in, and is required to proceed "with the least delay possible" to the factory or workshop, "and make a full investigation as to the nature and cause of the death or injury caused by that accident. There shall be paid to the said surgeon for the investigation such fee, *not exceeding ten nor less than three shillings*, as a Secretary of State considers reasonable, which fee shall be paid as expenses incurred by a Secretary of State in the execution of this Act."

Inspectors under this Act are to be appointed by the Secretary of State, and paid by the Crown, but certifying surgeons are to be appointed by the inspectors, and remunerated by fees paid by the occupier of the factory. With regard to these fees, the following are the regulations, if the occupier and the surgeon do not come to a private agreement, which they are at liberty to do. When the examination is made at a factory within a mile of a surgeon's house, 2*s.* 6*d.* is allowed for the visit, and 6*d.* for each examination after the first five. This practically amounts to 6*d.* for each examination and certificate. In addition to this the surgeon is allowed mileage at the rate of 6*d.* for every half mile over the first mile. Thus, if a surgeon drives three miles and certifies to the fitness of 100 young persons and children, he will have to make 100 personal examinations, write 100 certificates, and will be paid £2 12*s.* for his trouble. For this he lays himself open to a charge of signing false certificates, and, in case of the charge being substantiated, to a fine of £20 or three months' imprisonment.

The remuneration is not sufficient, and, as was pointed out in the House of Commons, the fees paid for the certificates are less than those which are paid for making copies of birth certificates from church or other registers. If the inspection of young women and children is to be made in a perfunctory way, and without proper care or attention, it is not advisable or necessary to employ a medical man for the work; but if any care is required, and any knowledge of disease is deemed necessary, the scale of fees ought at least to be equal to those which a veterinary surgeon expects and gets for examining the lower animals. It would be much better that the certifying surgeons should be paid from the Imperial Treasury, but of this Mr. Secretary CROSS says he sees no prospect. If a medical man is to be able to take an independent course of action it is very undesirable that his fees should be paid by an occupier who may possibly be his best and most remunerative private patient. At present we think that the scale of fees is totally inadequate, and we believe that the profession will not supply "certifying surgeons" for the working of an Act of Parliament which tacitly stigmatises a medical opinion as practically worthless.

Annotations.

"Ne quid nimis."

THE COLLEGE OF PHYSICIANS AND MEDICAL WOMEN.

THE position taken by the Fellows of the Royal College of Physicians in deciding not to grant their licence to practise physic to women is both clear and intelligible. They were careful to show that they do not so much oppose the creation of medical women, as they are unwilling to lend any assistance to, or to co-operate with, those who are anxious to introduce women into the medical profession. Above all, they do not wish to make women constituents of the College.

Sir Joseph Fayrer made an important explanation, which demolishes one of the arguments on which the advocates of medical women have been wont to rely. It had been said that medical women were needed because medical men were denied access in their professional calling to women in India. This was contrary to his experience. He had never had any difficulty in entering the zenanas when real sickness existed. Medical men were, with few exceptions, admitted freely everywhere in India. The contrary opinion at present prevalent in the public mind was of purely English origin.

WORK AND PAY UNDER THE PROVIDENT SYSTEM.

IN noticing lately the large sum which had been distributed among the three medical officers of the Royal Victoria Dispensary, Northampton, an institution in which the profession is greatly interested, we indicated it would be important to know the work which such a sum represented; in other words, to have the other side of the account. We now have this desideratum in the full annual report. The amount paid by patients in the year 1877 was £2356 7*s.* 8*d.*, in the following items:—Entrance fees and fines, £260 9*s.* 8*d.*; members' cards, £15 8*s.* 7*d.*; ordinary payments, £1948 14*s.* 5*d.*; and midwifery fees, paid by free members, £131 15*s.*: making in all £2356 7*s.* 8*d.* Of this sum £1805 4*s.* 7*d.* was divided among the three medical officers for their services during the past year. Dr. Barr received £980 19*s.* 11*d.*; Mr. Moxon £498 11*s.* 4*d.*; Mr. Evans £325 13*s.* 4*d.* Let us see what was the service which was rendered for these goodly-looking sums. We shall take the case of Dr. Barr, as that of the senior and most popular member of the staff. For a sum of under £1000, Dr. Barr attended 3541 paying members and their families. But the valuable report enables us still more minutely to analyse Dr. Barr's work. Dr. Barr paid no less than 16,092 visits to patients at their own homes, or at the rate of 44 a day, including Sundays; his attendances on patients at his own house were 9950; his attendances on patients at the dispensary were 1647. In addition to all this work, he attended 168 midwifery cases, or nearly one every other day. It would be interesting to hear Dr. Barr's own account of the way in which he gets through such an amount of work satisfactorily to himself and the patients, leaving himself time to do not a little private practice. For our part, we scarcely understand how it is done. There is no better test of medical labour in dispensary practice than the visits paid to patients in their own homes. If Dr. Barr had only been paid the modest sum of one shilling per such visit, he would have been entitled to over £800. This is taking no account of midwifery or attendances on patients at his own house and the dispensary. We have said enough to show that the position of the medical officer in this admirable institution is no sinecure; that the work is greater in value than the money paid for it. We gather from the report of the Committee that this is their opinion. As the Northampton institution leads the whole cause of Provident Dispensaries, we do not doubt that it will yet further educate its members to a proper remuneration of medical service.

CORONERS' WORK AND ITS DISTRIBUTION IN 1877.

IT appears from the Registrar-General's four Quarterly Returns for 1877 that during the year 25,623 deaths in England and Wales were registered from the certificates of coroners, being inquest cases. This number was below that recorded in any of the four preceding years. The reported deaths from violence during the year were 16,718. Presuming, therefore, that an inquest was held in every case of death from violence (which is not, however, the case), it follows that inquests were held in nearly 9000 cases of sudden death from natural causes. The proportion of inquest cases to total deaths in England and Wales averaged 5·1 per cent. in 1877, and ranged in the several registration divisions from 3·8 per cent. in the eastern agricultural counties to 6·4 per cent. in the metropolis. The lowest county percentage was 3·5 in Kent and Essex, whereas in the other counties the proportion ranged upwards to 6·5 per cent. in Cornwall and Warwickshire, and 7·2 per cent. in Wiltshire. The wide range in these proportions affords the strongest evidence of the want of uniformity in the exercise of the discretion of coroners as to the necessity for holding inquests. It appears impossible to give a satisfactory explanation of the fact that during 1877 the proportion of inquests held in Wiltshire was more than double that in Essex.

Bearing upon the amount of coroner's work done in 1877, it is not without interest to note some of the inequalities of the incidence of this work upon coroners in different parts of England and Wales. It appears from the Medical Directory that at the close of last year there were 324 coroners in office in England and Wales, excluding eight deputy coroners, and that five appointments were vacant. Of these 324 coroners, 220 belonged to the legal and 47 to the medical professions, while 57 were neither medical men or lawyers; thus 68 per cent. were legal, 14 per cent. medical, and 18 per cent. were coroners not belonging to either of those professions. In England there appear from this list to be 294, and in Wales 35 coroners. In England the average number of inquests held by each coroner during the year was 83, and in Wales only 35. The average number of inquests held by the coroners in the different English counties varied in a remarkable manner, and a few of the instances of the unequal distribution of coroners' work may be referred to. In Dorsetshire there are 12 coroners, who held but 135 inquests during the year, averaging but 11 inquests to each coroner. In Oxfordshire the number of inquests held by the 10 coroners during the year did not average more than 16. In Kent no less than 21 coroners hold office, without counting 4 deputy coroners, yet only 572 inquests were held, averaging but 27 for each coroner. In Yorkshire there are 23 coroners, who held an average number of 108 inquests. In Lancashire the 16 coroners held 4059 inquests, equal to 254 per coroner. In Surrey there are but 3 coroners, and the number of inquests averaged 435 for each coroner, while it is well known that by far the larger number of inquests are held by Mr. Carter, the coroner for the Eastern division of the county, which includes South London. In Middlesex the inquests held averaged 515 for each of the 8 coroners, but in point of fact nearly the whole of the inquests in Middlesex are held by 3 of its coroners. Although it would be impossible for coroners to hold as many inquests in rural districts, where distances are great, on account of the scattered population, there can be no doubt that the efficient performance of coroners' work would be promoted by a redistribution of

coroners' districts. No useful purpose can possibly be served by having 21 coroners in the county of Kent, some of which hold but an inquest or two throughout the year; and it is as manifestly undesirable that one coroner should be so overburdened with work as to be expected to hold on an average three inquests daily.

THE PHYSIOLOGY OF VOICE AND THE PHONOGRAPH.

THE years 1877 and 1878 will be noted in the annals of science for the great additions which have been made to our knowledge of acoustics, and especially to the physiology of speech. Hitherto all attempts to construct a musical instrument capable of imitating the human voice have been so far failures that the idea was very generally held that the sounds peculiar to the voice of man were producible only by means of the human larynx and the human mouth. Edison's phonograph, however, has revolutionised our ideas on that point, for in it we are confronted with the phenomenon of a machine, made entirely of metal and paper, emitting articulate words in tone and measure exactly resembling those of the original speaker. The human quality of the words emitted by Edison's phonograph is calculated to astonish and appal those who hear it for the first time, and the extreme simplicity of the mechanism adds greatly to our wonder at the result. The phonograph is formed of a receiving drum, a recording cylinder, and a transmitting drum. The receiving drum consists of a disc of thin metal fitted into the thin end of a short conical tube. This disc has a blunt needle fastened to its centre, and this needle can be made (with each vibration of the disc) to impinge on the recording cylinder. The necessary vibrations of the receiving drum are caused by speaking loudly and distinctly down the conical tube of which it forms the end. The recording cylinder is made of brass, and is about four inches in diameter. It has a revolving and a horizontal motion, and is marked on the surface by a spiral groove, the thread of which passes exactly opposite the needle of the receiving drum. When it is desired to make a record of a sound or a speech the recording cylinder is covered with a thin sheet of tinfoil which is readily indented by the slightest movement of the needle of the disc of the receiving drum which impinges upon it, each dent in the tinfoil sinking into the groove of the cylinder. The cylinder is set in motion, and at the same time someone speaks loudly and distinctly into the tube of the receiving drum, thereby causing the drum to vibrate in response to each wave of sound. As a result of this we see the surface of the tinfoil marked with a spiral line of tiny indentations, which have been made by the needle of the receiving drum. the characters of the indentations varying remarkably with the pitch and characters of the sound which had produced them. Thus the record is made by the production of inequalities on the surface of a sheet of tinfoil by means of a needle attached to a vibrating disc. These inequalities are capable of causing in the transmitting drum vibrations exactly similar to those to which they owe their origin. The transmitter consists of a paper drum-head fixed in a circular frame. In front of this drum-head and attached to its frame is a steel spring, the end of which, just opposite the centre of the drum-head, is furnished on one side with a needle, which can be made to impinge on the spiral groove of the cylinder, while from the other side a silk thread attaches it to the centre of the drum-head, the thread being sufficiently taut to keep the drum-head slightly convex. The cylinder being brought back to zero, and the needle of the transmitter being made accurately to impinge upon it, we hear, when the cylinder is made to rotate, the sound produced by the vibrations of the drum-head as the inequalities of the tinfoil travel over the end of its spring needle. This sound is almost indistinguishable from the human voice.

By means of a water-tympanum the horizontal vibrations of the drum-head can be made to move a pen vertically, and we are thus enabled to get a tracing, showing the force and duration of each vibration. Such an arrangement is called a phonautograph. The phonograph and the phonautograph present us, as it were, with the ground plan and section of the waves which produce articulate speech.

The complicated mechanism with which we speak, a mechanism the perfection of which is ever a source of wonder, is not, it must be remembered, a simple acoustic instrument. Its various parts have more than one function, and these functions, so intimately connected with nutrition and respiration, are each of them more essential for the life of the individual than speech. As regards speech itself, it is wonderful how little seems to be absolutely necessary for its complete performance. The utterances of ventriloquists have made it highly probable that very perfect articulation is producible without any appreciable movement of the lips or tongue, and experiments made for us by disease and surgery have confirmed these surmises. Operations for removal of the tongue have proved that a man can talk fairly well without this organ; loss of the epiglottis causes only a slight alteration of the character of the voice; one vocal cord (in cases where one is completely ulcerated away) seems capable of producing sufficient vibration for the purposes of phonation, and where both are removed the ary-epiglottic folds, as Dr. Yeo and Mr. Lister have lately shown, seem capable of, in some sort, supplying their place; or, as Dr. Foulis has demonstrated, the function of phonation can be performed by an artificial reed placed in the larynx, the sound of which is capable of being moulded into articulate speech by the cavities of the mouth and nose. Lastly, the phonograph shows us that the majority at least of articulate sounds are producible without the aid of the peculiar resounding cavities of the mouth and nose; and some experiments conducted by Fleeming Jenkin and Ewing, which are foreshadowed in last week's *Nature*, seem to indicate that Helmholtz's theory, that the vowel sounds are due to the prominence of notes of absolutely definite pitch, is not tenable. The pitch of the sounds emitted by the phonograph varies with the rate of its rotation, and Messrs. Jenkin and Ewing have found that the character of the vowel sounds is accurately maintained, no matter how quickly the cylinder of the instrument be made to revolve.

FOOTBALL ACCIDENTS.

THE accidents from football will soon have to be reported in the local papers under a permanent heading, for during the present season an alarming number has already been recorded, and one young man at Ashby-de-la-Zouch has received such injuries as to cause his death on the day following the game. We are accustomed to fractured legs and clavicles, sprains of the knee and ankle-joints, and contusions of every degree of severity, and have protested more than once against such barbarity in sport as football under the present rules undoubtedly is. Surely a case of death from rupture of the intestines will induce the chief football clubs to reconsider their laws, so that skill may have some advantages over mere weight, and courage over sheer brute strength. The question of what forms unfair "charging" should not be determined by individual opinion, but by regulations carefully drawn up and rigidly insisted on; indeed, all the laws of the game require careful reconsideration, or we shall soon find more players committed for trial for having caused the death of their opponents. No one can witness a football match, or examine the teams after its completion, without coming to the conclusion that if some modifications are not speedily introduced, football will soon, in the words of the coroner's jury, "be erased from the

pastimes of England." We should be sorry to see a game with many merits so degenerate as to require its being placed in the same class as such purely brutalising exhibitions as pugilism, cock-fighting, and the other "manly" sports of a past generation. Surely the captains of the chief football teams can so modify the regulations—"both Rugby Union and Association"—that peril to life and limb may be reduced to the chance that it is in other athletic sports. The immense popularity of the game will be of but little avail if no attempt be made to prevent a recurrence of such grave accidents as have lately been so prevalent in most parts of the kingdom.

"CHEMICAL" FORGERIES.

A RECENT case at the Mansion House recalls one of the dangers of "applied chemistry." Common ink is so easily removed by well-known chemical agents that it is wonderful that fraudulent alterations in documents are not more common. A solution of chloride of lime, for example, removes ink stains, old or new, with the greatest ease, and we have seen valuable prints on which an ink-bottle had been upset restored almost to their original state by its action, the print being floated in a common sponging bath filled with a clear solution of the chloride.

Many attempts have from time to time been made to prevent the possibility of chemical forgeries in cheques and similar documents. Some bankers use paper printed with elaborate patterns in colours so delicate as to be destroyed by any liquid which would dissolve ink. The engraving on the face of Messrs. Coutts and Co.'s cheques is wonderfully minute, and the details can hardly be seen without a magnifying glass.

Another method is the incorporation into the paper of materials which change colour with the ordinary solvents of ink. Iodide of potassium was at one time employed, the action of chloride of lime upon it being to liberate iodine, and so cause a deep stain on the paper. It was, however, easy to remove the iodine by weak alkaline solutions, and the paper did not come into general use. A better contrivance was that patented many years ago by Mr. Barclay. The agent he introduced was the colourless ferrocyanide of manganese. Paper containing this salt gives a blue colour with acids, the iron of the ink being converted into Prussian blue, and a brown with alkalies, the manganese taking oxygen from the air and remaining on the paper as peroxide.

We think that model cheques might be made by introducing ferrocyanide of manganese into the paper, and printing an elaborate pattern with common writing ink, or some other colouring matter still more evanescent.

Paper stained with writing-ink was at one time, and, for aught we know, is still sold. It possesses, however, but little protective value.

MARLBOROUGH HOUSE.

THE observations made by Mr. Gerald Noel on Marlborough House, on the 18th inst., in Committee of Supply of the House of Commons, confirm the remarks we had occasion to make a week ago on the efficiency of the drainage works recently executed there. It is pleasant to add, moreover, that the House, instead of having to be asked for £10,000 as the cost of these works, as was feared, was asked only for £4100. Having regard to the magnitude of the works undertaken, this sum indicates that the cost has been sharply looked after by the Office of Works—let us hope not too sharply. Cheap work is a besetting sin of that office, and too often carries with it the shortcomings of cheapness. We have, however, Mr. Gerald Noel's assurance that Marlborough House is now the best-drained residence in London.

When first we directed attention to the sanitary condition of the basement of Marlborough House, we were accused of exaggeration in our statements. Here is Mr. Gerald Noel's account of that state before the works began, as softened to meet the susceptibilities of members of Parliament:—"The drains were in the very worst possible condition. Drainage ran in from the street and directly from St. James's Palace, and there were runs for rats all over the place." *The Times*, commenting upon Mr. Noel's statement, takes occasion to remark upon the averment that Marlborough House has been drained on the most scientific principles. "With the greatest possible respect for science, it is impossible not to see that it is not always justified by results. Men and women live healthily where, according to hygienic science, they ought to be carried off summarily by disease; and, again, they are struck down where preventable diseases ought not to reach them." The last sentence is worth recording as a curiosity of ingenious fallacy. It must be confessed that when our great contemporary does blunder, she blunders with a genius quite peculiar to herself.

SYPHILIS COMMUNICATED BY TATTOOING.

IN the current number of the *American Journal of the Medical Sciences*, Drs. Maury and Dulles, of Philadelphia, have described a most interesting series of cases in which syphilis was undoubtedly communicated to fourteen persons by tattooing. The tattooer contracted syphilis in February, 1877, and was under treatment at the Philadelphia Hospital until March 6th. On April 14th he returned with mucous patches in his mouth and condylomata around his anus, and remained until May 16th. He left uncured, and went to Reading, where he practised tattooing, and communicated the disease to most of those he operated on. On June 20th he again presented himself at the Philadelphia Hospital, with mucous patches and condylomata still existing, and on August 2nd was discharged for insubordination. He then went to Jersey City and remained there until Oct. 6th, when he returned to Philadelphia and was arrested and committed to prison in the next week. He had then slight inguinal adenitis, mucous patches in his mouth, and a condylomatous patch at the bottom of his scrotum. The mucous patches in his mouth were extensive, and two of them were situated just within the lips at the back of the angles. Whilst tattooing he frequently wetted the needles in his mouth, and, in some cases, he also moistened the pigments (vermilion and Indian ink) with saliva. The details of twenty-two cases, which were thoroughly examined and their histories taken, are minutely recorded by the authors. Special care was taken to exclude the possibility of the syphilis having been acquired in any other way than by the tattooing. In fourteen cases the evidence makes it absolutely certain that this was the mode by which the virus was introduced into the system. In three cases the patients were tattooed, but escaped infection; whilst the others are more or less doubtful. It is important to notice that the persons who escaped were operated on in June, when the mucous patches were well developed; and as in these cases the needles were repeatedly introduced into the mouth of the operator, and the pigments, in one case at least, mixed with saliva, they conclusively show that the unmixed salivary secretion cannot communicate syphilis. We must suppose that the needles fortuitously happened not to come into contact with the mucous patches. In two cases the figures were made at different times, at one of which the pigment was mixed with water and at the other with saliva, and the disease unmistakably started from the latter. The primary lesion was always a papule, but passed on, under accidental circumstances, to excoriation, ulceration, and pustulation. The whole series of cases is so well described, and the results of inoculation on such a large scale are fortunately so rare, that we may advise not only

syphilographers, but medical men in general, to peruse this article. It must remove many erroneous ideas which still exist about the nature of the various manifestations of syphilis. In the army and navy, at least, a stop to the useless and possibly pernicious practice of indiscriminate tattooing might easily be brought about by our military and naval authorities if soldiers and sailors were plainly told the risks to which they were exposing themselves. As the War Office authorities are said to be favourable to the introduction of this practice into our army, as a check against desertion, it may not be superfluous to point out that it would be imperatively necessary to appoint a superior officer for its supervision. The needles would require to be kept as scrupulously clean as if they were ordinary surgical instruments, and care taken lest any fluid but water were used in moistening the pigments. Syphilis is much more liable to be inoculated by the process of tattooing, if carelessly performed, than by vaccination, and, unlike the latter operation, has no claim whatever to utility.

EVOLUTION IN ITS TRUE RELATION TO PATHOLOGY.

THE *Academy* of March 9th calls attention to the fact that the *Archiv für Pathologische Anatomie und Physiologie* has just begun its seventh volume. The first article in it is "On the Standpoints of Scientific Medicine," from the pen of Professor Virchow, who has been a contributor to the journal for thirty years. It appears that the first article which he wrote for the *Archiv* was upon exactly the same subject. The article is wise, thoughtful, and suggestive, and may also, perhaps, prove prophetic. The following is Professor Virchow's statement on the problem of evolution and its true relation to pathology:—

"It is the same blind passion for imitation and systematising which in the last few years has borne such terrible fruits in the 'bubble companies' of speculators. Because one manufactory for railway goods was in a flourishing state ten were at once founded, without remembering that the same demand did not require a tenfold supply. Because one or other contagious disease is contracted through bacteria, therefore all contagion must at once be of a bacterian origin. Nothing has operated more mischievously in this direction than the crude systematising of Darwinians. It is true that for us who had known the old natural philosophy it was a great surprise to see how by the genius of one man a thought which had already been accepted as an *à priori* necessity by natural philosophers was, after long and, unfortunately, not altogether unmerited banishment, enabled to reassert its rights, and was not merely revived, but made the foundation of a general system of the development of the organic world. But to turn a problem into an article of faith, to make a motive for investigation into a principle of synthesis, and, instead of examining, to revel in suppositions, is almost more dangerous than the *à priori* reasoning of the old philosophy of nature; for even the firm facts which had been established in the mean time were crammed into the new system, and ran the risk in this connexion, under the appearance of hypothesis, of losing their real significance. The 'struggle for existence' seemed to many people to be something quite new and unheard of, as if the doctrine of self-preservation and of the instinct of self-preservation had not been the foundation of biology from time immemorial. Even the doctrine of hereditary transmission—so patent a fact of pathological experience—dazzled in its new form many eyes but little used to the light of science, and the attempt to consider pathological inheritance from a perfectly new point of view led many neophytes in our science to lavish expenditure of learning, to which, strange to say, the archives of pathology were hardly called on to contribute. I need not here remind you that I belong to those who did not need this new incitement to consider the variability of species as a necessary condition for the mechanical theory of life. In a speech on the mechanical conception of life which I delivered before the Congress of Naturalists at Carlsruhe in the year 1858—a year before the publication of the first edition of Darwin's 'Origin of Species,'—I stated this in the most decided manner (from Speeches on Life and Sickness; Berlin, 1862). I had already, in the year 1848, laid no less stress on the mechanical origin of life from general motion as a logical necessity (see Efforts for Unity in Scientific Medicine; Berlin, 1849). I was therefore, from the first, prepared to accept gladly each fact which could establish the variability of species on original generation, and to value it as an important gain. But I cannot forbear, on the ground of my own experience, from warning you solemnly against the danger of taking hypotheses for facts, and of forgetting, in the facility of general explanations, the necessity of authentic proofs for every single case."

PUBLIC HEALTH AT ST. PETERSBURG.

THE organ of the Russian Sanitary Association, *In Zdorovie*, expatiates on the fact that though the town of St. Petersburg is not yet two centuries old, it already possesses about 670,000 inhabited houses. Peter the Great founded this city in 1703, by constructing with his own hands the first wooden hut, which, by the way, has been carefully preserved to this day as a sacred historical relic. The first brick house was built in 1710, and two years later the Imperial residence was transferred from Moscow to the banks of the Neva. Under these circumstances, sanitary disadvantages which are characteristic of towns possessing streets that date from the middle ages, might have been avoided at St. Petersburg. As a matter of fact, the thoroughfares are indeed wide and straight, and flanked with mansions and palaces. These houses are, for the most part, built of brick and covered with lime or stucco. The interior is protected from the cold by a system of double windows, which entirely exclude the external air. When the entire apartment is not warmed with hot-air pipes, each room is furnished with an enormous stove. By this means the temperature is kept at from 55° to 60° F., while outside the thermometer falls to 22° and even 25° below zero. In the poorer quarters the houses are still built of wood, with narrow windows that scarcely admit the purifying rays of the sun. Balconies running round these dwellings recall by their appearance the Swiss cottages. The absence of ventilation, the fact that whole families live in the same atmosphere for an indefinite time, the dirt in the streets, the lack of cleanliness in-doors, all contribute to produce a high death-rate. Without counting children still-born, no less than 5725 deaths occurred between the 1st of May and the 1st of August last year. Of this number 870 were attributed to zymotic diseases; general and seasonable diseases were responsible for 3046 deaths, and 1803 are ascribed to unknown causes and accidents. Altogether, this is equivalent to a death-rate of 34·19 per 1000 on the population. If, as Mackenzie Wallace asserts, Peter the Great's avowed object in building St. Petersburg was "to open a window by which the Russians might look into civilised Europe," we trust that the contemplation of the efforts made in great cities of the West will convey some notion as to the importance of ventilation and cleanliness.

TAKING ADVANTAGE OF THE IRRESPONSIBILITY OF THE INSANE.

THE most important socio-legal aspect of the case of John James Coupe, an attendant at an asylum, convicted of inciting a convalescent lunatic to commit murder and robbery, and condemned to ten years' penal servitude for the offence, is the light thrown on the possible abuse of the doctrine of irresponsibility. The presumption was that a patient might be induced to commit a crime, relying on his technical disability derived for the character of being, or having been, "insane." This opens a question of grave moment. It is notorious that criminal and ex-criminal lunatics do, under certain circumstances, exhibit a disposition to take advantage of their "irresponsibility." Attention should be carefully directed to this matter, and in any

inquiry by Commission into the legal position of persons supposed, alleged, or "certified" to be insane—an inquiry urgently needed in the interests both of patients and the public—especial attention should be bestowed on the too commonly forgotten bearing of the doctrine of irresponsibility on the moral and mental consciousness of convalescents. There is great danger lurking on the reverse side of this proposition, whereby an opening is offered for sinister influences, and the process of recovery is delayed by destroying a strong incentive to self-control. As regards this particular case, no greater mistake could be made than to suppose the testimony of a convalescent lunatic to matters of fact is not trustworthy as far as it goes.

ZYMOTIC DISEASE IN MUNICH.

JUDGED by its mortality statistics, Munich is one of the most unhealthy cities of Europe. The population of Munich in 1877 was estimated at 215,500 persons, and the death-rate during the year was equal to 33·9 per 1000 persons living, showing but a slight decline from the rate in the preceding year, which was 34·5. The birth-rate was equal to 43·3 per 1000, against 43·5 in the preceding year. Very nearly 25 per cent. of the deaths in Munich during last year were due to diseases of a zymotic character, including 1291 from diarrhœal diseases, 210 from diphtheria and croup, and 173 from enteric fever. The most noticeable point in the zymotic mortality is the excessive fatality of diarrhœal diseases classified under the heading of "darmcatarrh and enteritis," to which 1291 deaths in the year are referred, equal to a death-rate of 6 per 1000 persons living; the fatality of this disease was almost stationary throughout June, July, August, and September, and the monthly number of deaths from this disease ranged from 49 in March to 159 in July. This continued fatality of diarrhœa throughout the year is an exceptional feature in the mortality returns for Munich. Diphtheria and croup together are debited with 210 deaths during the year, and enteric or typhoid fever with 163; diphtheria was rather less, and enteric fever rather more fatal in 1877 than in 1876. One other feature of the Munich mortality statistics affords even stronger evidence of its insanitary condition than the excessive proportion of deaths from zymotic diseases: this is the terribly high rate of infant mortality. During the year 1877 the proportion of deaths under one year of age to births registered was equal to no less than 373 per 1000; the average proportion of infant mortality during 1877 in twenty of the largest English towns measured in the same manner did not exceed 154 per 1000, while in London it was but 146. Thus in Munich, infant mortality in 1877, compared with that which prevailed in London, showed an excess of 155 per cent. Not many years ago the mortality statistics of Liverpool were as unfavourable as those of Munich now are. Sanitation in Germany is beginning to receive more attention, and the unhealthy condition of Munich will probably not much longer be tolerated.

THE SEMICIRCULAR CANALS.

M. CYON has in preparation a work on the function of the semicircular canals, in which he will bring forward new facts in support of the theory that is at present generally received regarding their use. He has communicated to the Académie des Sciences the following conclusions at which he has arrived. These have scarcely the originality that is assumed, although, no doubt, the evidence on which they are based will be an important addition to our knowledge of the subject. (1) The semicircular canals are the peripheral organs of the sense of space—i. e., the sensations produced by the excitation of the terminations of the nerves in the ampullæ of the canals serve to form our impressions of the three dimensions of space, the sensations from one canal corresponding to one dimension. (2) By the assistance of these sensations there is formed in our brain the representation of an ideal space to which are related those impressions from other senses which concern the arrangement of objects around us and of our body among those objects. (3) The recognition of the existence of a special organ for the sense of space affords a base on which the two theories of binocular vision may be reconciled—the empirical theory of Helmholtz and the "nativist" theory of Hering. (4) The physiological excitation of the peripheral nerves of the sense of space probably occurs in a mechanical manner by means of the otoliths which are found in the ampullæ; these otoliths would be set in vibration by every active or passive movement of the head, and perhaps also by the aerial waves communicated by the tympanum to the liquid of the labyrinth. (5) Thus the eighth pair of cranial nerves contain two entirely distinct nerves of special sense—the auditory nerve and the nerve of space (Raumnerv). (6) The central organ of the sense of space presides over the distribution, and over the gradation, of the innervating force which should be communicated to the muscles for the movements of the eyes, of the head, and of the rest of the body. (7) The disturbances manifested after a lesion of the semicircular canals are due (*a*) to a visual vertigo produced by the discord between the space seen and the ideal space, (*b*) to the false notions engendered as to the position of the body, (*c*) to disorders in the distribution of the innervating force to the muscles.

THE COST OF MEDICAL EDUCATION.

THERE is, we understand, a general feeling among the teachers of medicine in London that the old charges for medical teaching are no longer enough to cover the cost of apparatus and to remunerate the teacher. At a meeting of the representatives of every school in London, held on Wednesday evening, it was unanimously resolved to commend to the consideration of the schools the propriety of raising the fees twenty-five per cent. Though the carrying out of this proposal will have far-reaching consequences, that will require much elucidation, it must be admitted that, in London at least, where so much of the cost of working medical schools falls on the teachers, there is a good deal to be said in support of it. At the same time it will add gravely to the cost of medical education in England, where the Government are seriously proposing to sanction a scheme for a mere licensing examination that is to cost not less than thirty guineas.

SANITARY PERVERSITIES.

THE following important letter has been addressed by the Local Government Board to the Local Board of Accrington. The facts to which it refers need no comment:—

"Local Government Board, Whitehall, Feb. 16th, 1878.

"SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 18th ult., in reply to their communication of the 29th of December, respecting the appointment of Mr. John Ewart as medical officer of health for the Accrington Urban Sanitary District. The Board observe that the reduction in the salary assigned to the above-mentioned officer—viz., from £100 to £80 per annum—has been made in consequence of the sanitary authority having in their advertisement for candidates invited them to state the salary required, and owing to Mr. Ewart having offered to accept the office at the lower amount. The Board further observe that you have not informed them, as requested in their letter of the above-mentioned date, of the grounds upon which the sanitary authority have appointed to the office a medical practitioner possessing a surgical qualification only. The Board direct me to state that they have invariably expressed their strong disapproval of inviting candidates to tender for the office of medical officer of health, and in cases where such a course has been adopted they have declined to allow any repayment on account of

the salary out of the parliamentary grant. The Board also direct me to state it is not their practice to dispense with the full qualifications required to be held by a person appointed under their general order of the 11th November, 1872, to the office referred to, unless it can be shown that a difficulty exists in obtaining the services of a fully qualified practitioner to discharge the duties of the office. Under these circumstances the Board are unable to sanction Mr. Ewart's appointment with a view to the repayment of any portion of his salary out of the funds voted by Parliament for that purpose.

"I am Sir, your obedient servant,

"J. F. ROTTON,

"Assistant Secretary."

After the reading of this letter the local Board passed a resolution offering Mr. Ewart the appointment of medical officer of health at a salary of £40 for twelve months. We shall be curious to know whether this offer has been accepted.

TOYS FOR SICK CHILDREN AND BOOKS FOR HOSPITAL USE.

FRESH supplies of toys for sick children are needed at the hospitals; and it may be well to repeat the suggestion made some months ago, that the character of these remedial, because cheering and diverting, appliances should be suitable as regards material and colour. The points to be observed are principally two: they should be durable, and at the same time capable of being disinfected, or destructible without injury to the little patients, who "find pleasure in breaking what other children take pleasure in making." It is quite possible to propagate diseases by means of toys, especially dolls nursed in bed; and although this is not likely to be done in hospitals, the danger may be avoided by selecting materials which may be readily disinfected, or, still better, remorselessly destroyed. Attention has so often been directed to the necessity of caution as to poisonous or deleterious colouring matters that the subject need only be now mentioned. A liberal supply of toys for sick children should be forthcoming. They may form a prominent agency in the work of cure. Books for use in hospitals should be renewed frequently, and the old copies ought to be destroyed. It is *impossible* to disinfect articles of this character and construction. Each volume may be a nest of germs, needing only to be disturbed to vitalise and propagate disease.

THE GENERAL MEDICAL COUNCIL.

SUMMONSES have been issued for a meeting of the General Medical Council on Wednesday, April 10th, at two P.M. The cause of thus early calling the Council together may be found in the urgency of the following important matters, which must necessarily occupy the attention of the *whole* Council—viz., the amendment of the Medical Acts, the Duke of Richmond and Gordon's Government Bill, the Conjoint Scheme, and the Dental Practitioners Bill. The discussion of these measures, in addition to the ordinary business of the Council, is likely to render the session of 1878 one of more than ordinary duration and interest.

HOSPITALS AND PROVIDENT DISPENSARIES.

IT has been decided to abolish the out-patient department in connexion with the West Bromwich Hospital, and to have a provident dispensary arrangement in its stead. A proposal to restrict the advantages of the provident dispensary to persons married, with not more than £78 a year, or single with not more than £60, was negatived in favour of a suggestion to have no fixed financial condition of membership. A motion was passed to the effect that persons with more than £100 a year should be rated double. The ordinary rates for adults and children over fourteen are 4*d.* per month; for children under fourteen 2½*d.*; for confinements by medical men 15*s.*; by midwives 7*s.* 6*d.* According to the existing arrangement persons may have medical attendance at the above rates with incomes up to £100. This rule may lead to much abuse. Nor is any sufficient limit to the abuse of the institution by persons with incomes exceeding £100 provided in the rule requiring them to pay double. Unless provident dispensaries are well regulated they may generate greater abuses than those they are intended to remedy.

UNQUALIFIED MIDWIFERY IN ANGLESEY.

AN inquest in Anglesey is reported in the *Carnarvon and Denbigh Herald*, relative to the death of Elizabeth Jones, aged forty-two, who died shortly after delivery on Sunday, the 17th of February. It would seem that from Saturday, at ten, till Sunday at noon, she was attended by Mr. Griffith Williams, who had no registerable medical qualification, but held a certificate from the Coombe Lying-in Hospital, Dublin. The case proving serious, further assistance was sent for, but by mistake, another unqualified gentleman arrived. Both these gentlemen failing to effect delivery, after various attempts with the forceps, Mr. Lewis Thomas, of Amlwch, was asked to come, and, not succeeding with forceps, had recourse to craniotomy. Mr. Thomas very properly refused to give a certificate, remarking that there were far too many unqualified young men about the island. The poor woman was interred, but afterwards exhumed, in consequence of rumours to the effect that she had not received proper treatment. The jury acquitted the two unqualified assistants. It is, nevertheless, a great evil that young men should mislead the poor as to their medical character, which can easily be done without assuming false titles. The theory of Williams, in this case, was that he was the assistant of Dr. Williams, of Llanrug—distant, we suppose, forty miles from Llanfechell. Whenever such cases as the above occur, it is the duty of practitioners to refuse a certificate, and do their part towards obtaining an inquiry by a coroner.

THE DENTAL PRACTITIONERS BILL.

THIS measure passed its second reading on the 15th inst., on the understanding that the important amendments set down by Mr. Adolphus Young are to be supported by the Government. It would be premature to discuss the provisions of the Bill introduced in the Upper House by the Duke of Richmond and Gordon on Tuesday, but this much may be said, no measure which does not expressly prohibit men who are *not* surgeons from describing themselves as "surgeon-dentists," "dental surgeons," "surgical dentists," and the like, can be satisfactory to the medical profession. The title "surgeon" must be specifically reserved for the use of the persons who have a right to it—namely, Fellows, Members, and Licentiates in general surgery of legally incorporated Colleges of Surgeons and Masters in Surgery of the Universities. To this principle we trust the Legislature will adhere.

SMALL-POX IN DUBLIN.

THE Sanitary Association of Dublin has issued a protest against the prevalence of small-pox, pointing out that the disease was due probably to lack of cleanliness. There are two little lanes, called Brady's and Orr's Cottages, joining on to Mayor-street, more particularly remarkable for filth and bad odours. Here decaying vegetable and other matter is allowed to remain on the ground for an indefinite time. The town scavengers should certainly visit this part of Dublin, for these lanes are little better than elongated dunghills on which an innumerable herd of pigs besport themselves. Simultaneously with these complaints we hear that 109 summonses have been issued for non-abatement of nuisances, so that perhaps some improvement will be

achieved. At the same time there were 86 cases of small-pox in Cork-street Hospital, 25 in the Hardwicke, 4 in the Meath, 2 in the Mater Misericordiæ, and 1 in Sir P. Dun's Hospital. During the same week 36 dwellings were disinfected and 438 articles purified by exposure to dry heat. The mortality during the week ending March 9th amounted to 31·2 per thousand for Dublin, and 34·8 per thousand for the city district.

THE FOOD OF RUSSIAN SOLDIERS.

THE Russian soldier in the piping times of peace is not particularly well fed. His paternal government appears to think that a sufficiency of rye bread and *vodki*, the latter an abominable compound, which may be compared to petroleum or naphtha, will keep him in health and contentment. In war, however, there is reason to believe that he is, by force of circumstances, compelled largely to rely on what he can obtain in the way of requisition in the enemy's country. He is wise if he rejects the diet provided for him by his regimental commissariat. An Austrian military paper lately gave the result of an analysis of a sample of the bread supplied to the Russian troops in Bulgaria. The examination was carefully made, and revealed the presence of nineteen per cent. of sawdust and fourteen per cent. of sand.

TYRONE COUNTY INFIRMARY.

THE report of this institution for the year 1877 shows that it performs a work of great utility, which is appreciated by the poor and suffering of the district. During the past year 718 patients were under treatment, of which 280 were medical cases, and the rest surgical. The finances are in a satisfactory condition, and the balance-sheet shows that the receipts were £1759, while the expenditure was only £1554, giving a balance of over £200 on the right side. The cost per bed amounted to little more than £39, which must be accounted a very low figure. The medical officer of the institution, Mr. E. C. Thompson, M.B., upon whom apparently devolves its entire control, must be congratulated on his efficient and economical management.

"OUR BOYS."

WE are glad to see that "Our Boys," in the full tide of their unprecedented success, have given of their abundance to the suffering poor, as the following list of contributions made by Messrs. James and Thorne to the London hospitals testifies:—The Royal General Theatrical Fund, £100; the Metropolitan Free Hospital, £50; the Charing-cross Hospital, £50; the Great Northern Hospital, £50; and the Boys' Home and Refuge, Great Queen-street, £50.

DEAN STANLEY.

WE are glad to be able to state that the Dean of Westminster has so far recovered his strength as to be able to leave London for the more genial climate of the south of Devonshire. After a few weeks' sojourn at Torquay it is confidently anticipated that the very rev. gentleman will be able to resume his duties at Westminster Abbey.

THE twentieth report of the Commissioners of Inland Revenue, now issued, contains a good deal of interesting information. We find that during the past year 13,128 samples of food, &c., were examined at the Somerset House Laboratory, representing an average of 43 samples examined and reported upon during each official day. Under the Sale of Food and Drugs Act, 32 cases, dealing with samples of butter, milk, bread, oatmeal, arrowroot, mustard, tea, whisky, and preserved peas, were referred to the laboratory by various magistrates, in the majority of cases at the request of the defendants. In some instances conclusions were arrived at widely different from those of the local analyst; but, as a rule, the results of the latter were confirmed. Among the cases referred from Scotland was one in which whisky was adulterated with nearly one ounce of sulphuric acid per gallon, and another in which butter contained 54 per cent. of foreign fat. We are not surprised to read that the sophisticated whisky was the cause of much illness.

IN the recently issued annual report of the Hereford City and County Lunatic Asylum, the medical superintendent, Dr. Chapman, adverts to a form of treatment very commonly used in some asylums. The custom is that of ranging patients who are in any degree troublesome in rows on benches, and keeping them there by placing a heavy table in front of them, and not unfrequently by sharp reprimands from the attendants. This produces an appearance of order, but the effect on the mental and physical health is said to be bad. The practice may be regarded as a variety of restraint which may be abused, and on that account should be discontinued in well-conducted establishments.

MR. RICHARD LIEBREICH has resigned the post of Ophthalmic Surgeon to St. Thomas's Hospital, which he has held since the opening of the new hospital. We understand that he has taken this step with the object of spending a part of the year abroad. There are several candidates for the vacant appointment already in the field. Amongst the numerous rising ophthalmic surgeons in London there should be no difficulty in selecting one qualified to fill such an important appointment. We trust that the authorities of St. Thomas's will be guided in their choice entirely by the professional qualification and experience of the candidates, and not by any personal or social considerations.

THE Croonian Lectures to be delivered by Dr. Pavy, at the College of Physicians, on Wednesday, March 27th, Friday, March 29th, and Wednesday, April 3rd, at five P.M., on "Points connected with Diabetes," will be published in this journal. We understand that a full criticism of the chemico-physiological bearings of the subject will be given, with a demonstration of the results obtainable. Members of the medical profession are admitted on presentation of their card.

THE vacancies in the surgical staff of the Westminster Hospital have been filled up by appointing Mr. Keene as Aural Surgeon and Mr. A. Pearce Gould as Assistant-surgeon. We are glad to find that election by the whole body of governors has been given up, and this function relegated to a committee, whose decision has to be approved by the next ensuing quarterly Board of Governors.

DR. JOHN GIBSON FLEMING has resigned his seat on the General Medical Council, as representative of the Faculty of Physicians and Surgeons of Glasgow, after a period approximating to fifteen years. Dr. Fleming always took an active part in the debates of the Council, and his kindness and geniality of character made him highly popular with his *confrères*.

THE Salisbury Infirmary has become entitled to nearly £60,000, under the will of Mrs. Ann Fowler, one-half to go to the general fund, and the other to the fund for the nurses who shall become disabled from age or infirmity after fifteen years' service.

THE mortality of London last week was at the annual rate of 22·3, a slight decline in that of the previous week. The 1526 deaths included 53 from small-pox, 32 from measles, 28 from scarlet fever, 6 from diphtheria, 84 from

whooping-cough (against 102 in the last return), 27 from different forms of fever, 13 from diarrhœa, and 340 from diseases of the respiratory organs.

THE ROYAL COLLEGE OF PHYSICIANS.

THE ADMISSION OF WOMEN.

THE meeting of Fellows specially summoned to decide the question whether under any circumstances women should be admitted to the licence of the College was held on Monday afternoon, and it was a very full one.

Sir GEORGE BURROWS, Bart., moved that "the Royal College of Physicians of London, having carefully considered the important question of the granting of a licence to practise physic to women, resolve that the College do steadily adhere to the terms of its charter, and do not grant its licence to practise to women." Sir George said that he did not propose to enter into the general question of the admission of women to practise medicine in England. He did not think that anything he might say would alter the opinion of those who were present, for no doubt the great majority of them had already come to a deliberate conclusion on the subject. He also felt that the admission of women to the profession in some form or other was a foregone conclusion, since the Russell-Gurney Act gives the power to any of the licensing bodies to admit women if it thought fit to do so. The Legislature had settled that point, and had provided facilities for the admission of women, whilst some bodies had actually taken action under the Russell-Gurney Act. But the College of Physicians may refuse to lend any assistance to, or to co-operate with, those who are anxious to admit women to the profession, and can agree that the College shall not act upon the permissive Russell-Gurney Act. He hoped that by a large majority the College would decide not to sanction any procedure under the Act. He indignantly repelled the charge of trades-unionism leveled again and again against the profession in this matter. Twenty years ago he was prepossessed in favour of admitting women to medicine, and he admitted females into his classes and wards. He was therefore not prejudiced against them. But he found that his action narrowed his teaching considerably, and was bad for students and the young women in many ways, and he came to the conclusion that the two sexes ought not to be educated together. It was a mistake socially and morally. The resolution which he proposed was merely an assertion of a principle, and as such he hoped the College would accept it.

Dr. WEST seconded the resolution in an able speech, in which he pointed out that no such important benefits were likely to follow the admission of women to the profession as would justify so grave a change, whereas the evils would be great. He combated in detail the arguments adduced by women themselves in reference to the former point, and went into particulars to show how unfitted they were to engage in the necessary study and to do the needful work of practitioners. He also showed conclusively by figures that it was not true, as asserted, that the number of men entering the profession was diminishing, and that, in view of this fact, there was a reason why women should be encouraged to enter it.

Dr. BUCKNILL would have been glad had the resolution stated the reasons why women should not be admitted. He contended that the modern desire of making women work is a retrograde step.

Sir JOSEPH FAYRER said his large and wide experience of India had never shown him the necessity for medical women. Midwives no doubt were most valuable, and he would support any scheme for increasing their number. It had been said that medical women were needed because medical men were excluded from zenanas and the like, and were denied access in their professional calling to women in India. This was contrary to his experience. He had never had any difficulty in entering zenanas where real sickness existed. Medical men were admitted freely everywhere in India. There were occasional exceptions to the rule no doubt. The erroneous idea at present in the public mind on the point had really been suggested from England.

Dr. BARNES referred to the fact that the College exercised a certain control over the members of the profession attached to the College, and it was needful to keep their ranks pure; but it would be difficult to continue it in the case of women, especially if they contracted many of the ordinary relationships of life; they would therefore be a source of danger and difficulty.

Dr. MAUDSLEY said Sir George Burrows' resolution did not deal fairly with the question announced to be submitted to the College—whether under *any* circumstances the College should give its licence to women. He contended that men had no right to prevent women practising medicine if they could satisfy examiners. He thought women unfit for the profession, and few would ever gain licences. But to prevent a harmless and useful social experiment of the kind being made was unfair and injudicious. To refuse it was to deny to women the opportunity of finding out their own powers. This was a sort of protection, and when once admitted there was no end to it. It was like oppression; and he asked if really medical men were competent or impartial enough to judge in this matter. It may be that another tribunal would be founded to meet the demand of society, and to take this matter into its own hands, to the detriment of the College. Referring to public opinion, recent legislative action, and the projected Government Bill, he contended that the women's movement must sooner or later have its way, and it was in entire accordance with the principle of freedom which permitted anyone to do what he could. He moved an amendment—"That the College is prepared to grant its licence to women who have submitted to all the requirements for admission, and shall submit to the tests of examination sufficient for men."

Dr. J. E. POLLOCK seconded the resolution.

Dr. CHOLMELEY pointed out the fallacies of Dr. Maudsley's argument as regards the contemplated action of the College, arguing that all the College proposed to do was, not to prevent women entering the profession, but to declare that it did not want them in the College of Physicians.

Dr. QUAIN pointed out the different position occupied by the Medical Council and the College in this matter, the former representing all the licensing bodies. But, as a matter of fact, the Medical Council had said that women were wholly unfit to become members of the profession. It had been said that Parliament had decided that women should be admitted to the profession; but Parliament had not passed any compulsory, but only a permissive measure. As to public opinion being in favour of the admission of women to the profession, it did not exist, as stated by Dr. Maudsley, according to whose views women ought to have any and everything they asked for, including the suffrage. He referred to the questions set at examinations, showed the unseemliness and impossibility of admitting women and men to similar examinations, and concluded by expressing his opinion that no body was so fit as the College of Physicians to express an opinion on the matter before them.

Sir WILLIAM GULL argued that it would not be right for the College, in the face of existing public opinion, to oppose the admission of women, though he admitted that women were not fitted for medical practitioners.

After some further discussion, Dr. Maudsley's amendment was put, and 16 hands were held up for it; and Sir George

Burrows' resolution was carried by an overwhelming majority, only 15 hands being held up against it.

MEDICAL ASPECTS OF THE LATE WAR.

WE are enabled to publish two letters this week, one from Erzeroum, the other from Bucharest, which form a painful and instructive commentary on the observations we had occasion to make a short while ago on the prevalence of typhus among the belligerent forces. So far as loss of life is concerned, there is reason to fear that the mortality from shot, shell, cold steel, and the sickness of the campaign will sink into comparative insignificance before the ravages of typhus. This malady has assumed almost pestilential proportions, and, not confined to the soldiers, is now spreading far and wide among the populations which have been brought into contact with them. When the medico-sanitary history of the war comes to be written, there will again have to be recorded the terrible predominance of typhus and other camp diseases among the causes of death.

The Russian *Medical Gazette* gives the names of thirteen medical men with the army of the Caucasus who had been killed by typhus—namely, MM. Germanovitch, Glasko, Kaplan, Karpovitch, Pélikan, Magdoussiew, Alexéiew, Bogdanovitch, Vassiliew, Boukovsky, Menchini, Seltzer, and Ivanow.

Of the small staff of English surgeons in Erzeroum sent out by Lord Blantyre and the Stafford House Committee, Drs. Guppy and Pinkerton have unhappily been carried off by typhus. Dr. James Denniston, who had suffered from typhus in Scotland, has passed through the epidemic unscathed. Lord Blantyre has favoured us with the following most interesting letter from the last-named gentleman, sent from Erzeroum under date January 30th, 1878:—

Dr. James Denniston to Lord Blantyre.

"Erzeroum, Jan. 30th, 1878.

"An opportunity for getting away letters has rather unexpectedly arisen, and I take advantage of it. The Russians have given permission to the French Consul to send out a courier, and he has been kind enough to allow us to send a small letter each. You will have heard, I have no doubt, of the death of Pinkerton, and of the illness of the others. Pinkerton took ill on the 27th December, and, after a very malignant typhus fever, died on the 7th January. Ryan and Morisot, and Williams, the interpreter of the Stafford House Committee, were at the same time very ill also with typhus. Ryan especially was very dangerously ill, and, at one time, I thought that he too would die, but he has a strong constitution and came through, though the fever has left him very weak and quite unfit for work; in fact, he will not be able to work for a month or so.

"Since Fetherstonhaugh took ill I have been working the English Hospital, and when Ryan and the others took ill the management of the Stafford House Hospital fell on me. I carried on both for about a month, but, I am afraid, in a very imperfect manner; and the duty of nursing the sick at home, coming at the same time, proved too much, and began to tell on me; so that we have entirely given up the Stafford House Hospital, and when Ryan is able he will join me at the English Hospital, where there is quite enough work to occupy our time fully. The English Hospital is now and always has been quite full, and is working very satisfactorily. The cases are mostly very serious, as the authorities make a point of sending me the worst cases they can lay their hands on. The cases are principally frost-bites (almost all involving both feet) and typhus fever, along with chronic cases. The frost-bites are terrible. I have four cases in which the limbs are entirely gangrenous as far as the calf of the leg. One poor captain has lost both feet, both hands, and both ears. To show you how the hospital is appreciated, I may tell you that we have a colonel very ill with typhus, and four captains. All are very anxious to get into the hospital, but I do not encourage them much, as the common soldiers are much worse off. I have not space to give you details of the work, but will reserve them for another letter. All the blankets you sent have been distributed among the hospitals. They have come in very useful of late, as new hospitals have been opened, and they prove of great value. The flannels and stockings are distributed to each man as they leave the hospital, and are greatly prized, and, I have no doubt, save many a man from death from cold.

"As to the condition of the town, I suppose I ought not to say much, as this may fall into the hands of the Russians. Things look black enough, though wood and provisions are terribly dear, and the poor suffer terribly. I have taken upon myself to give £10 of the £100 you sent for relief to the soldiers to Mr. Cole, the American missionary, who has organised relief for starving inhabitants, both Turks and Armenians. A *parlementaire* came in yesterday, and left to-day. We hear that they demanded a surrender, which was, of course, refused; a bombardment is consequently expected at any time, and will probably have our hands full of freshly wounded. I am myself in perfect health, and quite able for work. The others are slowly regaining strength. We miss poor Pinkerton sadly. I must now close, hoping I may get another opportunity of letting you hear of us soon."

Our correspondent in Bucharest writes as follows, under date Feb. 21st, 1878:—"I send you a few jottings. Our men are doing well. Two amputated Turks will soon be able to use their crutches. Our dysentery patients are convalescent. We have still bad cases of typhus, but we hope they will do well, as others have done before them. Typhus is now what we have all to fear. A gentleman, who came from Fratesti two days ago, says that seventy per cent. of the Russian medical staff and nurses are disabled. Some sisters have already died of it, and two or three Roumanian doctors. It is proposed not to receive any more cases at the hospitals in town, but to send them to the hospitals beyond the barrier, and to some monasteries which are being turned into hospitals. I don't know a sadder sight than we experienced the other day—two carts full of Turkish prisoners ill of typhus, being driven from hospital to hospital, and there being no room for them! Our typhus ward was quite full, but we went down to see the poor fellows, and gave them wine and nourishment. One I saw *was dying*, so I had him lifted out and carried on to a bed. He swallowed some more wine, and spoke a few words as to his sufferings, and was dead in less than half an hour! Shortly after this an ambulance waggon drove up, packed full of typhus patients, but, alas! we could do nothing for them! The next morning, on entering the hospital, we found the hall full of officers and men, who had come to ask us to take them in. We could not do it, and they were removed to Malmaison. Government has voted 200,000 francs to inter the corpses of men and animals (or to burn them), and to purify the air between this and the Danube. It is believed that the Russian wooden temporary hospitals at Fratesti will be burnt to the ground. The following is a copy of a telegram sent to the Senate from the district of Tileorman:—'Typhus has taken such proportions in our town that we may say that it is making ravages. From the Mayor to the Minister we have appealed, saying that we are blockaded with the corpses of men and of animals only partially buried, and yet no one makes an effort to take any steps. All in power seem as if they had made a contract for our extermination. To-day we have no authorities to apply to, as both Prefect and Mayor are confined to their houses with illness. We appeal to your patriotism and feelings of humanity to raise your voice so that we may be relieved from our sad position.' This telegram was read aloud in the Senate two or three days ago. Now that the snow is beginning to melt, I am told that what the thaw uncovers all along the banks of the Danube, and up to near Bucharest, is something too awful to describe. We heard yesterday that there had been two deaths from *plague* in the Military Hospital here; but Dr. Mawer has not yet seen any medical man who can confirm or contradict this. With all our work we keep well. Soon we shall close our little hospital, but this will not prevent us from going on with our nursing and general help."

STEWART INSTITUTION FOR IMBECILE CHILDREN.—The eighth annual meeting of the friends of this charity was held last week in Dublin, the financial report being a fairly good one. The Committee, however, beg for further assistance, as they have been obliged to borrow a sum of £6000 to meet their engagements. The new institution will probably be open for the reception of patients some time in the summer, and is expected to accommodate about 300 inmates.

Correspondence.

"Audi alteram partem."

ON THE COMPULSORY NOTIFICATION OF CASES OF INFECTIOUS DISEASE.

To the Editor of THE LANCET.

SIR,—In your issue of Feb. 23rd you call attention to an important letter on the above subject from Mr. Walmsley, the Mayor of Salford. Most medical men will agree with him in thinking that, before passing such stringent regulations as those proposed by the Association of Municipal Corporations, it is at least desirable to ascertain "the feeling of the profession upon which the burden would have to be laid." Mr. Walmsley suggests "that a Parliamentary committee should be formed in connexion with our medical associations, to watch legislation as it affects our profession;" but I would venture to point out that we have already, in the British Medical Association, a most efficient organisation for the required purpose, and that it has already carefully considered and given its deliberate opinion on the subject. Its Committee on the Registration of Disease has for many years not only concerned itself with the importance of national returns of all fresh cases of disease arising in public practice, but it has from time to time pointed out the urgent need of such returns for the suppression of infectious diseases.

In 1870 an influential deputation of the Association waited upon Mr. Goschen, then President of the Poor-law Board, to represent their views; and early in the following year the report of the Royal Sanitary Commission contained an admirable summary of the arguments in favour of a system in every way identical with that of the Association.

In 1872 a proposal for the compulsory notification of all cases of an infectious character was made by the Manchester and Salford Sanitary Association, and this was shortly afterwards endorsed by the Joint Committee of the British Medical and Social Science Associations.

In 1876 the question was fully considered by the former Association at their annual meeting in Sheffield. The following passages are extracted from a report that was then unanimously passed at a large general meeting of the members of the profession then present.

"It is evident that any measure for the registration of *all cases* of infectious disease, occurring in both public and private practice, must take the compulsory form in order to be effective. But of late some controversy has arisen as to the person from whom the needful information should be required—whether, in fact, the onus of reporting the case should rest upon the householder or the medical attendant. The authoritative declaration of the nature of the disease must necessarily come in the first instance from the medical attendant, and it would probably be unnecessary to make any enactment for the purpose of ensuring that this declaration should be made, since it is part of the unwritten law that guides the profession in their dealings with their patients. Compulsion on this point might, however, in some cases, prove a help to the medical attendant. On the other hand, to be obliged to furnish information to a public official, with regard to sickness occurring in a family, might reasonably be resented by the medical profession. It would be regarded by many not merely as an unnecessary addition to their work, but as an inquisitorial test of the extent of their practice, and as leading to a breach of professional confidence that might cause much annoyance both to doctor and patient. Payment for the information given does not in any way affect this view of the question, but it would be practically an important objection to the medical reporting of all cases of disease of an infectious character. It could hardly be intended that no remuneration should be given for the responsibility and trouble involved in drawing out the necessary certificates. Even though the fee were small, and, probably, inadequate, still it would amount in the aggregate to a very large sum per annum. When it is considered that several hundreds of thousands of such cases would be registered in the course of a year, if the measure were thoroughly carried out, it will be seen that the cost of the medical reports alone would be so great as practically to be a bar to the whole enterprise. No such objections apply to the proposal to make the householder responsible for the declaration of the presence in his house of diseases likely to be injurious to the community. It would indeed be in accordance with the precedent set in the Public Health Act of 1875, which enacts (clause 84) that the keeper of a common lodging-house shall give notice of the presence of fever or any infectious disease, not only to the medical officer of health of the local authority, but also to the Poor-law relieving officer of the union or parish in which the house is situated. It is for these reasons that your Committee, whilst they cordially support the movement to obtain a complete registration of these diseases, desire to express their opinion that the proper person to make the return should, in the first instance, be the person in charge of the case or the householder, and not the medical attendant upon the case."

I am sure that the Parliamentary Bills Committee would welcome any suggestions on the subject coming from a man of Mr. Walmsley's position and attainments.

I am, Sir, yours &c.,

ARTHUR RANSOME.

St. Peter's-square, Manchester, Feb. 28th, 1878.

THE LATE DR. WUCHERER AND THE FILARIA BANCROFTI.

To the Editor of THE LANCET.

SIR,—In the first number of THE LANCET for the present year, and under the heading of "Helminthological Work in 1877," mention is made of a paper of mine published in the *Gazeta Medica da Bahia* of last September, and translated for the *Archives de Médecine Navale* by my friend and distinguished colleague, Dr. Le Roy de Méricourt.

On two paragraphs in that helminthological review I would beg to say a word or two, in order to correct an impression they would seem to give of some implied censure on my part of the eminent helminthologist, Dr. Cobbold.

The first passage I refer to makes me "rather severe on Dr. Cobbold" for not having associated the name of Dr. Wücherer with the adult representative of the micro-filariæ of chylous urine and the blood, recently discovered by Dr. Bancroft, of Brisbane; the second affirming that, in an important appendix to his translation of that article of mine, Dr. Le Roy de Méricourt "defends 'le savant helminthologiste anglais' from the Bahia physician's reflections."

Now, as neither in that nor in any other writing had I ever found fault with Dr. Cobbold for the reason alleged, as little, of course, could my learned friend have defended him from any censure of mine on that score. In the summing up which he gave of the termination of my paper, the illustrious editor of the *Archives* says: "Le Docteur Da Silva Lima consacre la fin de son article à l'expression du regret qu'il éprouve de l'oubli dans lequel le savant helminthologiste anglais a laissé le nom vénéré de Dr. Wücherer, lorsqu'il cite dans son travail les investigateurs infatigables dont les travaux ont contribué à l'élucidation de cette question;" and further on, "L'oubli, certainement involontaire, de l'helminthologiste anglais dans l'article de THE LANCET du 16 Juillet dernier est réparé dans un nouvel article du même savant sur la Filaria Bancrofti inséré dans le même receuil," &c.

It is evident, therefore, from these quotations, that, in in the first place, I simply regretted that the name of Dr. Wücherer, undeniably the first discoverer of micro-filariæ in chylous urine, should not in his first article have been mentioned by Dr. Cobbold among the different writers he cited as having contributed to the elucidation of that subject; and, secondly, that Dr. Le Roy de Méricourt assures us Dr. Cobbold corrects this omission in his second paper, published in THE LANCET of the 6th October, 1877, and of which at the time of the publication of mine I could of course have had no knowledge. There was, therefore, a misunderstanding as to the meaning of my protest. Dr. Cobbold had every right, alike as a great authority on these matters and from his perfect acquaintance with the subject, to assign whatever name he chose to the adult filaria. He associated it with the name of Dr. Bancroft, its first discoverer; and I made no observation whatever on the nomenclature adopted by him, and still less did I claim for the name of Dr. Wücherer such honourable tribute of recognition; however little out of place, in my opinion, would have been such homage to the memory of the first

investigator who proclaimed the existence of a new human entozoon, demonstrating its embryos in chylous urine. Dr. Wücherer was a distinguished German physician (born in Portugal), who for many years practised in Bahia, where he died in May of 1873. But for this lamentable loss to science, it is hardly likely that the progenitor of his immature filariæ would long have eluded the diligence with which he searched for it. For Dr. Bancroft in Australia, and for Dr. Lewis in India, was reserved the honour of that important discovery; and for our own countryman Dr. Felicio dos Santos, of Rio de Janeiro, that of first confirming it, here in Brazil, in last November.

Dr. Wücherer's discovery of the miniature filariæ was first made by him on the 4th of August, 1866, and published in the *Gazeta Medica da Bahia* on the 15th December, 1868. It was only some time afterwards, and perhaps without the knowledge of their previous discovery, that Salisbury in the United States, and Lewis in Calcutta, met with these same filariæ in the bladder, the urine, and the blood, the former naming them "Trichina cystica," the latter, more appropriately, "Filaria sanguinis hominis"—a title conditional on his having up till then found these embryonic animalcules only in that liquid.

I may be permitted to add that the existence of these micro-filariæ has been verified here in Brazil in the blood in cases of craw-craw, of lymph-scrotum, and of elephantiasis, as well as in both the lactescent and clear lymph from the same lymph-scrotum, and also in the lactescent serum of hydrocele.

In giving insertion to these few lines in your well-known periodical, you will afford me, in my obscurity, the opportunity of not only correcting the somewhat inaccurate interpretation given of my observations on Dr. Cobbold's first paper on the "Filaria Bancrofti," but also of again bearing witness to the high esteem and admiration which, in other writings of mine, I have expressed for that distinguished helminthologist.

I am, &c.,

J. F. DA SILVA LIMA, M.D.

Bahia, Brazil, Feb. 20th, 1878.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF COMMONS.

Friday, March 15th.

DENTAL PRACTITIONERS BILL.

THIS Bill was read a second time.

HOUSE OF LORDS.

Tuesday, March 19th.

MEDICAL ACTS AMENDMENT BILL.

THE Duke of RICHMOND introduced a Bill to amend the Medical Act. It provides that a diploma, both in surgery and medicine, shall be necessary before registration, and for the registration of foreign and colonial diplomas in cases in which these diplomas are recognised as equal to our own. It also makes provision for the examination of a joint board for the whole kingdom, if such a board should be formed; regulates the examination for dentists and midwives, and in regard to the latter imposes penalties upon any midwife who shall assume the title of "registered midwife" without having obtained the diploma of the Medical Council. Lastly, it provides that women shall not become members of the senate of the university or of the corporation by virtue of having qualified as practitioners, and that they shall not be required to pass the same examination as men in order to obtain their diploma, unless they themselves choose to do so.

The Marquis of RIPON approved of the proposal to insist on all medical men passing both in surgery and medicine, but regarded the proposal as to joint boards as too permissive in character.

The Bill was read a first time.

THE LEVÉE held by Her Majesty on Tuesday was attended by the following doctors:—M. Baines, Brodie, Horace Dobell, Wilson Fox, J. Lawrence-Hamilton, Langdon Down, Leone Levi, McEwan, R.N., Alfred Meadows, William Playfair, E. Godfrey-Purcell, George Owen Rees, G. Saunders, Sieveking, Mark Batt Tanner, E. Sparshall Willett, Macleod of Macleod.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members were elected Fellows of the College at a meeting of the Council on the 14th inst.:—

Chevers, Norman, Tavistock-road; date of diploma, Jan. 1841.
Freer, Walter C., L.S.A., Birmingham; Oct. 1841.

It is stated that nearly 400 candidates are now undergoing the preliminary examination in general knowledge for the Membership and Fellowship of the Royal College of Surgeons. The examination commenced on the 21st inst., at the University of London, Burlington-gardens.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 14th:—

Collins, George Duppa, King's College Hospital.
Diggle, John Arthur, Stretford-road, Manchester.
Pybus, John Alfred, Godalming, Surrey.
Smith, Herbert Arthur, Haverstock-hill.
Webster, Ridley Manning, Colebrook-road, Islington.
Wood, Charles, Trinity-square.

The following gentlemen also passed the Primary Professional Examination:—

L. R. H. Hackman, St. Mary's Hospital; Zebulon Mennell, St. Thomas's Hospital; Wm. Edward Veale, St. Bartholomew's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the March examinations the following obtained the licences in Medicine and Midwifery:—

MEDICINE.—Andrew Joseph Burke, Robert William Collis, Joseph Leopold Denison, John Elliott Dimond, James Joseph Edge, Robert William Minchin.

MIDWIFERY.—George Ernest Alford, Andrew Joseph Burke, Robert William Collis, Joseph Leopold Denison, John Elliott Dimond, Jas. Joseph Edge, Thomas Fredk. Fogarty, Francis Blaney Grew, James Campbell Hall, Robert William Minchin.

SEVEN deaths from small-pox were registered last week in Dublin, and six in the week preceding.

DAVID EVERETT, F.R.C.S. Eng., has been placed on the Commission of the Peace for the City of Worcester.

ON the 16th inst. there were 32 cases of small-pox in the Belfast Union Hospital, 17 fresh cases having been admitted, and 2 deaths having been recorded during the week.

THE Bradford (Yorkshire) Joint Infirmary Fund produced £3250; of which £2280 has been apportioned to the Infirmary, £559 to the Fever Hospital, and £355 to the Eye and Ear Hospital.

MR. E. PUGH, who has long been a most munificent supporter of the Wolverhampton and Staffordshire Hospital, has now offered £2000 upon condition that the interest arising from it shall be applied in giving admission tickets to the poor inhabitants of Bilston.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The sixth meeting of the session was held on March 1st, at the Royal Kent Dispensary, Greenwich-road, W. Johnson Smith, F.R.C.S. (President), in the chair; when Dr. Galabin read an interesting paper "On Operative measures for the relief of Congenital Atresia Vaginæ."

THE MEDICAL SOCIETY OF LONDON.—The 105th anniversary dinner of this Society took place on Friday, March 8th, at the Grosvenor Gallery, Dr. Buchanan, President, in the chair, at which a large number of the Fellows and their friends were present. During the evening the Fothergillian medal and two silver medals were presented, as already announced. The following is a list of the officers and council elected at the annual meeting, March 4th, for the ensuing year:—President: Mr. Erasmus Wilson, F.R.S. Vice-Presidents: Dr. Leonard Sedgwick, Mr. Richard Davy, Sir Joseph Fayrer, Dr. Clement Godson. Treasurer: Mr. Thomas Harvey Hill. Librarian: Dr. Theodore Williams. Secretaries in ordinary: Mr. J. Astley Bloxam, Dr. F. de Havilland Hall. Secretary for foreign correspondence: Dr. T. S. Dowse. Council: Drs. Percy Boulton, Crichton Brown, T. Lauder Brunton, George Buchanan, Alfred Carpenter, W. H. Corfield, Braxton Hicks, Constantine Holman, R. J. Lee, J. C. Thorowgood, Alfred Wiltshire; Messrs. William Adams, Royes Bell, Woodhouse Braine, Thomas Bryant, A. E. Durham, D. H. Goodsall, J. D. Heaton, Francis Mason, J. C. Wordsworth.

PRESENTATIONS.—A handsome testimonial has been presented to Mr. G. H. Maskelyne, of Faringdon, Berks, by the members of Court "Foresters' Home" and their friends. This mark of respect was offered chiefly in recognition of services rendered by Mr. Maskelyne to a member of the Court during the late epidemic of small-pox, and consisted of a solid richly engraved silver inkstand, with cut-glass bottles, and a silver gong in the centre. The whole proceedings connected with the presentation appear to have been of an eminently gratifying character.—On the 6th inst. the present major and minor students of the South London School of Pharmacy met their director, Dr. Muter, at the conclusion of the Chemical Lecture, and presented him with an address, accompanied with the gift of a magnificent silver and crystal epergne, most tastefully decorated with fruit and flowers. The address was expressive of their respect for him as a teacher, and their warm feeling towards him personally.

FATAL ACCIDENT TO A SURGEON.—Mr. Marriott Hall, a leading surgeon in Sheffield, has died from the effects of a shocking accident which he met with a few hours previously. In the morning he was out visiting patients, and, having a considerable distance to go, he rode one of his horses, a very high-spirited animal, which had been in the stable some time. He had ridden several miles and was on his way back to the town, when the animal commenced to rear and soon became unmanageable. It swerved a bit in the centre of the road for a little while and then fell, Mr. Hall falling underneath, and his head coming into contact with a kerbstone. He was removed in a state of semi-consciousness to the residence of Mr. Mark Firth, his father-in-law, which happened to be near. He then became unconscious, and died soon afterwards. Mr. Hall was only thirty-eight years of age.

Medical Appointments.

BALBIRNIE, J. P., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Loyal Furness Abbey Lodge of the Independent Order of Odd Fellows, Dalton-in-Furness, vice Clarke, resigned.

BROSTER, A. E., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer and Registrar to the National Hospital for the Paralysed and Epileptic, at £100 per annum, residence and board, vice Sankey, resigned.

BROWN, Mr. W. H., late Assistant House-Surgeon to the Leeds General Infirmary, has been appointed House-Surgeon to the West London Hospital.

CAPE, J. T., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Totnes Rural Sanitary District, at £100 per annum.

COLAHAN, N. W., M.D., has been appointed Professor of Materia Medica at Queen's College, Galway, vice Pye, lately appointed Professor of Anatomy and Physiology.

CRESSEY, G. H., M.R.C.S.E., L.R.C.P.L., has been appointed Medical Resident and Secretary to the Hertford Infirmary, vice Odell, resigned.

FAHIE, C. J., L.R.C.P.Ed., L.R.C.S.Ed., & L.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Lusk Dispensary District of the Balrothery Union, co. Dublin, at £125 per annum and fees, and £20 16s. 8d. as Medical Officer of Health, vice Mahony, deceased.

FISHER, J. A., L.R.C.P.Ed. & L.M., L.F.P.S.G., has been appointed Certifying Factory Surgeon for Garston, vice Worthington, deceased.

GARNER, Dr. J. E., has been appointed Medical Officer for No. 1 District of the Preston Union, at £110 per annum and fees, vice Hodgson, resigned.

GOULD, A. P., F.R.C.S.E., has been appointed an Assistant-Surgeon to the Westminster Hospital, vice Keene, resigned.

HEHNER, Mr. O., has been appointed Public Analyst for Ryde, at 10s. 6d. per analysis: minimum twenty per annum.

HILL, A. B., M.D., L.R.C.P.Ed., has been appointed Public Analyst for Warwick, at £5 5s. per annum and 10s. 6d. per analysis.

HOLLAND, L., M.B., M.D., has been appointed Aural Surgeon to the Newcastle Dispensary.

KEENE, J., F.R.C.S.E., has been appointed Aural Surgeon to the Westminster Hospital.

KNOWLES, E., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the No. 5 District of the Chesterton Union, at £50 per annum and fees.

LUSH, J. S., M.R.C.S.E. & L.S.A.L., has been appointed Medical Officer for the Seventh District of the Devizes Union, vice Hitchcock, resigned.

O'FARRELL, H., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Eyrecourt Dispensary District of the Portumna Union, co. Galway, vice Pelly, deceased.

PERCIVAL, G. H., M.B., M.R.C.S.E., has been appointed a Surgeon to the Northampton General Infirmary, vice Buszard, resigned and appointed a Physician.

PRIOR, C. E., M.D., F.R.C.S.E., has been reappointed Medical Officer of Health for the Biggleswade Rural Sanitary District, at £120 per annum; and for the Bedford Urban Sanitary District, at £100 per annum.

ROE, St. George J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Attendant to the Royal Irish Constabulary, Coolany and Templehouse, co. Sligo, vice Blennerhassett, deceased.

RONALD, R. W., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Applecross, Ross-shire, at £135 per annum, house, garden, &c., vice Farquharson, resigned.

SHEARER, G., M.D., L.R.C.S.E., F.L.S., has been appointed Lecturer on Botany at the Royal Infirmary School of Medicine, Liverpool, vice Carter, appointed Lecturer on Materia Medica.

SWAYNE, A. E., L.R.C.P.Ed., L.R.C.S.Ed., L.A.H.D., has been appointed Certifying Factory Surgeon for Hoo, Kent.

SWETE, E. H. W., M.D., has been reappointed Public Analyst for Coventry, at £30 and fees for one year.

THOMAS, J. W., F.C.S., has been appointed Public Analyst for Newport, Monmouthshire, at £40 per annum and fees.

TURNER, H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for No. 3 District of the Norwich Union.

Births, Marriages, and Deaths.

BIRTHS.

CLAY.—On the 9th inst., at Moseley-road, Birmingham, the wife of George Langsford Clay, M.R.C.S.E., of a son.

DAVIES.—On the 16th inst., at Umballa, the wife of Surgeon-Major R. W. Davies, 6th Dragoon Guards, of a daughter.

HAMILTON.—On the 15th inst., at Leven-terrace, Edinburgh, the wife of David James Hamilton, L.R.C.P.Ed., of a son.

HOGG.—On the 12th inst., at Gunnersbury, Chiswick, the wife of W. B. G. Hogg, M.D., of a daughter.

IMLACH.—On the 14th inst., at Liverpool, the wife of Francis Imlach, M.D., of a son.

MACLACHLAN.—On the 15th inst., at Doonbank, Ayrshire, the wife of William Machlachlan, M.D., of a son.

MARRIAGES.

HYDE—FOSTER.—On the 21st ult., at All Saints, Clayton West, Samuel Hyde, M.R.C.S.E., to Jane, daughter of Wm. Foster, Esq.

ROWNTREE—KIRKBY.—On the 27th ult., at the Parish Church, Marton, Yorkshire, William G. Rowntree, L.R.C.P.Ed., to Annie, daughter of the late John Kirkby, Esq.

DEATHS.

BAGG.—On the 13th inst., George William Bagg, M.R.C.S.E., of Prior's-Marston, aged 58.

CHENHALLS.—On the 4th inst., at St. Just, Cornwall, William Chenhalls, M.R.C.S.E., aged 42.

CORBETT.—On the 6th inst., at Lansdowne-road, Dublin, Joseph Henry Corbett, M.D.

HALL.—On the 17th inst., at Sheffield, Marriott Hall, M.R.C.S.E., aged 38.

LEWIS.—On the 10th inst., at Paddington-street, Marylebone, William Lewis, M.R.C.S.E., aged 41.

MACKENZIE.—On the 9th inst., at St. Peter's, Isle of Thanet, William Mackenzie, F.R.C.S., aged 80.

MAHON.—On the 9th inst., at Bushfield-avenue, Dublin, Henry Walsh Mahon, M.R.C.P.I., aged 69.

PARKE.—On the 5th inst., at Aghalee, co. Antrim, Samuel Parke, M.D., aged 31.

PASCALL.—On the 12th inst., at Torrington-square, William Larkins Pascall, L.S.A.L., aged 61.

PEARCE.—On the 8th inst., at Bude, Thomas Pearce, M.R.C.S.E., aged 74.

ROBERTS.—On the 2nd inst., at Llanrug, Griffith William Roberts, M.R.C.S.E., aged 42.

RUXTON.—On the 11th inst., at Hill of Fiddes, Foveran, Aberdeenshire, John Ruxton, L.R.C.S.Ed., aged 62.

SHAW.—On the 14th inst., at Flanderwell, Yorkshire, John Pearson Shaw, Surgeon, in practice prior to 1815, aged 88.

TAYLOR.—On the 16th inst., at Middleton, Lancashire, Edmund Taylor, L.S.A.L., aged 71.

THOMPSON.—On the 5th inst., at Methley, Yorkshire, Moses Thompson, M. & L.S.A.L., aged 67.

WHITWORTH.—On the 3rd inst., at Tenby, James Whitworth, L.R.C.P.Ed., aged 35.

WORTHINGTON.—On the 6th inst., at Garston, Lancashire, James Vince Worthington, L.R.C.P.Ed., aged 35.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Mitchell: Fat and Blood, and how to make them.
The Pantiles Papers. No. II. Vol. I.
Epping Forest.
The Proposed Volunteer Force for Active Service.
Dr. E. Levinstein: Morbid Craving for Morphia.
Dr. W. A. Hammond; Cerebral Hyperæmia.
The Transactions of the Edinburgh Obstetrical Society.
Dr. J. B. Russell: Report on the Outbreak of Enteric Fever in the West-end of Glasgow and Hillhead.
Dr. W. Sneddon on Numerical Anomalies of the Breasts.
Dr. Green: Pathology and Morbid Anatomy.
J. G. Beaney: Diseases of the Hip-joint.
Guide to European Universities.
M. Clarke: The Future Australian Race.
T. Gallard: De l'Avortement au Point de Vue Médico-Légal.
J. G. Beaney: History and Progress of Surgery.
Transactions of the National Association for the Promotion of Social Science.

Notes, Short Comments, and Answers to Correspondents.

QUACKERY IN SCOTLAND.

JAMES INGRAM, *alias* Robert Henry Ward, 32, Castle-street, Dundee, professing to be a member of the Reformed Medical Society of Brooklyn, U.S., has been advertising his power to cure by the issue of handbills and the publication of certificates. He was aware that his behaviour was not consistent with professional notions of propriety; but "so long as the orphan cried, or the lone widow wept, or the hot tears scorched a bereaved father's cheek on account of a delusive system of medicine, so long he would introduce a system of medical reform." But Mr. Henderson, the Procurator-Fiscal of Dundee, was unsentimental enough to investigate the genuineness of the certificates published, and to have the medicines of the reformer analysed. The certificates were found to be false and fabricated, and the medicines, though harmless, not worthy of the prices charged for them by the philanthropist. As the prisoner when tried had had three months' imprisonment, only one month more was prescribed for him. It is a pity that some of the quacks in England who prey upon the credulous poor are not dealt with similarly.

Orpheus.—We are unable to give the information required.

THE APOTHECARIES' COMPANY v. SHEPPERLEY.

To the Editor of THE LANCET.

SIR,—The appeal made by Mr. Stanger in your issue of the 16th inst. has met with a very satisfactory response, and, on behalf of the Nottingham Branch of the Medical Defence Association, I beg to acknowledge the receipt of many encouraging promises of support from influential medical men. It is not thought necessary or desirable to publish the names of those who have promised pecuniary assistance, especially as no consent has hitherto been obtained to such a course.

The importance of this prosecution to the profession at large can scarcely be over-estimated, the issue involved being neither more nor less than the right of chemists and druggists to prescribe. It is obvious that if we admit the "right" of prescribing at all, it is difficult to draw any line or limit where the practice shall cease, and chemists and druggists will become to all intents and purposes medical practitioners. The prefix "counter" to the word "prescribing" does not alter in the slightest degree the meaning of the latter word. If chemists can prescribe legally, there is no law which limits them to prescribe across a counter. If they visit a patient at his own residence, the offence is not in the visiting, but in the prescribing. Chemists and druggists have not received the professional training which would enable them to distinguish between the premonitory symptoms of dangerous diseases and what they are pleased to term "simple ailments." The patient they prescribe for across the counter for a cough or cold may be in reality suffering from consumption or heart disease.

The case of the Apothecaries' Company *v.* Shepperley is a test case, and, from its very simplicity, will solve in the most decisive manner the important question, Have chemists a *right* to prescribe? The chemists and druggists contend that they have a right to the practice of "counter prescribing," and are fighting for this alleged right with all the weight, influence, and pecuniary support of a large and powerful Association. The Nottingham Branch of the Medical Defence Association is but a small local Society. Nevertheless, we hope to have the question finally settled, and if the prosecution is successful, which we have good grounds for believing it will be, the Branch will be able and willing to meet all liabilities. But there is a proverbial uncertainty about law, and the Nottingham Branch feels that it is absolutely necessary to have a guarantee fund to provide against the possibility of an adverse decision, or of an appeal to a higher Court. It is with this object we are soliciting the aid of our medical brethren, and we look with confidence to the profession at large for such support as will enable us to fight the Chemists and Druggists' Association (the real, although not the nominal, defendant) on equal terms.

I am, Sir, yours obediently,
HENRY R. HATHERLY,
Hon. Sec., Nottingham Branch of the Medical Defence Association.

March, 1878.

INCONTINENCE OF URINE.

To the Editor of THE LANCET.

SIR,—Some years since I met with a suggestion by a contributor to THE LANCET of employing a light ligature on the penis for the above troublesome complaint, and I have since tried the remedy with considerable success; but I employ a piece of fine elastic web, such as I use for light spiral stockings. It is applied in the form of a figure-of-8 bandage, and fastened with a small hook and eye. A few weeks since I was applied to by a young medical student going in for his "prelim." He had had the first advice, and had taken belladonna and the usual remedies without the least benefit. I advised him, instead of using a urinal, which he wished to procure, to adopt the ligature; and he writes me, under date March 8th: "As it is now a week since I called on you, I think I have had time to judge the use of the elastic band. It has answered extremely well, and myself think it is much better than a urinal. Since I have worn it I have not passed any water at all [query, at night?]. It causes me no pain whatever, and I believe by wearing it looser gradually it will prove an eventual cure." I shall have much pleasure in sending any medical gentleman sufficient of the material to test the efficacy of the remedy. The cases that have come under my observation have been youths of twelve or fourteen years of age. Whether it would be as effectual in more advanced years I do not know.

I am, Sir, your obedient servant,
EDWARD HUXLEY.

Old Cavendish-street, March, 1878.

TYPHOID IN ST. MARYLEBONE.

IN his last monthly report, Dr. Whitmore alludes to the probable source of typhoid in his district, from which disease there had been four deaths in St. Marylebone during February. Referring to the difficulty of ascertaining the origin of the malady, Dr. Whitmore observes:—"I have sometimes thought that if a careful search beneath those houses in which typhoid occurs could be made, the cause would often be revealed. At the time when the drainage of houses was made compulsory, a large number of cesspools, instead of being emptied and filled up with dry clean earth, or brick rubbish, as they ought to have been, were simply bricked over and cemented. Is it not very likely that from many of these cesspools the pent-up poisonous gases—not always offensive—are beginning to escape, and, if so, is there any longer a difficulty in accounting for many cases of enteric fever the origin of which has hitherto been involved in obscurity?"

FOREIGN MEDICAL STUDY.

To the Editor of THE LANCET.

SIR,—Articles have at various times appeared in THE LANCET about foreign schools of medicine; but I do not think the advantages of a short sojourn in Vienna are sufficiently understood by English students and practitioners. There are here, what I believe cannot be found elsewhere, five and six weeks' courses of an essentially practical nature on almost every branch of professional knowledge, and, as some half-dozen of these can be taken at once without overworking oneself, a great deal can be learnt in a few weeks.

The material for midwifery is enormous, as in each of the three clinics there are about 3000 labours a year; the student can also perform all the midwifery operations on the dead body, which is, as far as I know, an unheard-of thing at home.

The difficulties which I think prevent men from coming here are probably—

1. Want of information about the courses &c.
2. A scanty knowledge of German.
3. The expense.

1. There is no Secretary to whom one can apply either by letter or personally for information as to when particular courses begin, whether they are already filled up, whether the teacher speaks English, &c. &c. Each professor or assistant makes his own arrangements, and at present the only thing to be done is to look at the notices at the hospital-gate, and to make inquiries from chance acquaintances, or to go boldly to the teachers themselves, who certainly always receive one with the greatest possible courtesy. Many of the courses may be begun at any period, the student being allowed to run on to the corresponding stage of the succeeding course, and many of them go on almost the whole year round.

2. The more German one knows the better of course; but a great deal can be learned with little or no knowledge of it.

3. Travelling to and fro costs about £15; lodgings, say 12*s.* a week; meals, 30*s.* a week; lectures, say six courses averaging 30*s.*, £9; so that £40 would suffice for a six weeks' stay, and £65 for a stay of three months.

The following short courses (in addition to the professors' clinics) are now being held, several of them by two or three different teachers:—Percussion and Auscultation, Diseases of Stomach and Intestines, Kidney Diseases, Skin Diseases, Chronic Nerve Diseases, Psychological Medicine, Laryngoscopy; Surgical Anatomy, Surgical Operations, Bandaging, Diseases of Urinary and Generative Organs, Syphilis, Orthopædic Surgery and Luxations; Operative Midwifery, Gynæcology, Gynæcological Operations; Children's Diseases; Ear Diseases; Eye Operations, Diagnosis of Eye Diseases, Anomalies of Refraction and Accommodation, Ophthalmoscopy; Dentistry Operations; Histology, Pathological Anatomy, Analysis of Urine, Action of Poisons, Electro-therapeutics; Forensic Medicine.

I remain, Sir, yours truly,
THEODORE MAXWELL, M.D. Camb.

Vienna, March, 1878.

F.R.C.S., (Birmingham.)—The annual election of Fellows into the Council of the College of Surgeons will take place, as usual, the first week in July.

VENTILATION ON BOARD SHIP.

To the Editor of THE LANCET.

SIR,—In your issue of last week I notice a communication from Mr. Jas. Hudson, of South Africa, calling attention to the defective ventilation on board ship. His experience on the subject is quite in accordance with my own, which is not inconsiderable, having held the appointment of surgeon in several of our large mail steamships; and in most of those in which I have served, as also others which I have inspected, there has been an almost utter disregard of the all-important subject of ventilation. The evil, as Mr. Hudson remarks, is certainly not peculiar to Cape steamers, and it might, I think, to a certain extent be obviated in the way proposed by your correspondent. But why not supply air to the various sleeping cabins in the same way as it is supplied to the stoke-hole &c.?—viz., by means of a large "cowl" from the upper or spar deck, a system of pipes conducting the fresh air into the cabins, the foul air being removed by means of the draught from the furnaces. Such a system might at any rate be adopted in all the cabins situated amidships, and in close contiguity to the engine-room, the port-holes of which it is almost impossible to keep open, even in moderate weather. But such an arrangement would be far too expensive to suit the directors of many of our Steamship Companies; they prefer to crowd as many people into as small a compass as is practicable, perfectly regardless as to the consequences to health, or inconvenience occasioned thereby.

The remedy for persons suffering from lung affections, and requiring a long sea voyage, is very simple. Avoid a steamship; and if they take their passage in a well-appointed sailing-ship, they will obtain the full benefit of a long voyage, pure air, and none of the disagreeables peculiar to a steamer.

I remain, Sir, yours truly,
A LATE STEAMSHIP SURGEON.

Gunnislake, Tavistock, Devon, March 18th, 1878.

Mr. J. Pringle.—There is not much to be gathered from books about the use of turpentine in diphtheria. It has been recommended in large doses, both for its stimulating effect and its tendency to promote the absorption of lymph in adynamic states of the system, where mercury is contra-indicated. Tanner mentions it as a *local* remedy to be painted on; but in his list of atomised fluids for inhalation, used in various affections of the throat, including diphtheria, he gives a formula for its use in the form of spray: from one to five minims are to be added to one ounce of water. In Dr. Cohen's work on Inhalation the use of turpentine in diphtheria is not mentioned.

A Painter.—The Turk has been supposed to have an original association with the Mongolian race, but this is now doubted.

CASE OF IDIOPATHIC TETANUS; DEATH ON THE TENTH DAY.

To the Editor of THE LANCET.

SIR,—As the subject of tetanus has recently been discussed in your valuable journal, I venture to bring before my professional brethren the notes of the following case, which I feel sure will be read with interest, and unfortunately adds one more to the already lengthy list of deaths from a disease over which our best remedies seem to have little or no control.

On Feb. 26th I was sent for to see a girl, aged ten years, who complained of stiffness about the neck and throat, pain in the epigastrium, extending to the back; unable to open her mouth far; face slightly drawn over to the right side; spasmodic contraction of facial muscles; pulse small and thready; temperature 102·2°; bowels confined; pupils contracted, and difficulty in swallowing. Ordered twenty-grain doses of bromide of potassium with five minims of tincture of opium every three hours.

Feb. 27th.—Spasms increased; risus sardonicus well marked; intense pain in epigastrium; great perspiration; abdomen very hard; opisthotonos very strong; temperature 103°.

28th.—Spasms about the same; had no sleep, but can open her mouth slightly better; temperature 102·5°. Ordered twenty grains of chloral every three hours.

March 1st.—Spasms still very severe; intense pain in abdomen and legs; opisthotonos very strong. Her father in the night attempted to force open her mouth, and snapped off a tooth. She speaks indistinctly, but says the chloral eases pain; temperature 103°.

2nd.—Much about the same. Continue mixture, with twenty-minim doses of spirit of chloroform.

4th.—Paroxysms more violent; difficult micturition; swallows with difficulty; temperature 104·6°. Administered chloroform.

5th.—Total loss of power in lower extremities; great difficulty in breathing and swallowing; mouth firmly closed; paroxysms very violent; intense pain in epigastrium and legs. Injected half a grain of morphia hypodermically morning and evening. Temperature 105°.

6th.—Paroxysms more violent; opisthotonos stronger; spasm of muscles of glottis; abdomen extremely hard; great perspiration; pulse very small, hardly perceptible. Repeated hypodermic injection. Temperature 106°.

7th.—Paroxysms more violent than ever; spasm of diaphragm; temperature 107·5°. Repeated injection. Patient died at two o'clock the same day in intense agony.

In this case there was not the slightest injury or wound of any kind to be found on the body; but on the Sunday previous to her illness the girl and one of her brothers had a quarrel, but whether she received any blow to account for the disease, or whether it might have resulted from exposure, I was unable to find out. As will be seen from my notes, the temperature was high from the first, and was never below 102°. Of the remedies tried, none seemed to have much effect upon the violence of the paroxysms, though from what I could make out from her extreme difficulty of articulation, and great eagerness to take it, the chloral seemed to give the greatest relief. I may mention that warm baths were ordered at first; but, as each attempt to move the patient brought on a paroxysm, they were discontinued.

I am, Sir, yours truly,

Dawley, Salop, March 11th, 1878. F. HOWARD DAVIS.

A Poor-law Doctor.—There are but two Sick Asylum districts in the metropolis—viz., the Central London Sick Asylum district, comprising the four unions and parishes of St. Giles and St. George, St. Pancras, Strand, and Westminster; and the Poplar and Stepney Sick Asylum districts, comprising the Poplar and Stepney unions.

Melampus should refer to our advertising columns.

THE MILITARY PRISON, MALTA.

To the Editor of THE LANCET.

SIR,—In THE LANCET of March 2nd, under the head of "Health of the Army," it is stated: "The Military Prison (Malta), which in 1875 furnished numerous cases of enteric fever, was in 1876 free from it, a result attributed to the *introduction* of the dry-earth conservancy system."

I would remark that the dry-earth system was adopted in this prison in the year 1873 in supercession of watercloseta, but the carrying out of it was very unsatisfactory. The closets were situated *inside* the prison at the ends of the corridors, and opening *directly* into them. The contents of the closets were emptied down perpendicular earthenware shafts into a movable receptacle below. These shafts in time became clogged, and when the covers were removed a very bad smell pervaded the whole prison. I strongly urged the necessity of having the closets removed altogether outside the building. This was at last done, and a very marked improvement has taken place in the health of the prisoners, which I attribute to the removal of the earth-closets outside the prison, and also to the improved scale of diet.

I am, Sir, your obedient servant,

R. A. P. GRANT, M.A., Surgeon-Major,

Malta, March, 1878. In Medical Charge of Military Prison.

Enquirer.—The Medical Register for 1878 will be published on the 29th of this month. It is somewhat late this year in consequence of the numerous alterations, great care having, we understand, been bestowed on its revision, especially as regards addresses.

RESPIRATORS.

To the Editor of THE LANCET.

SIR,—In consequence of observing the frequent use of unsuitable articles as "respirators," I am induced to ask you for space for a few remarks on this subject.

Respirators are apparatuses to breathe through—to breathe *through*, not only *into*. There are two kinds, and for two purposes: one to purify, disinfect, or medicate the air to be breathed; the other to warm it. The former might very properly be called mechanical and chemical respirators, and the latter climatic or winter respirators. The purposes being so very different necessitate a very different material for, and a very different construction of, the one from the other.

The mechanical respirator may be made of any material that will filter the air as it is being inspired, such as cotton, silk, wool, hair, sponge, or charcoal, and the same material will serve to retain the disinfectant or medicinal substance to be breathed. The best form of construction is that of two small frames of any light material, such as hair-cloth, bone, vulcanite, so arranged as to hold between them a layer of cotton, silk, wool, hair, sponge, or charcoal. Such a one is that designed by Professor Tyndall for firemen, and such is Wordsworth's "washable" respirator (referred to in THE LANCET of Jan. 26th, 1878), or it may be of any form convenient at the time; indeed an ordinary woollen muffler or silk pocket-handkerchief would serve very well, for it does not much matter if it does somewhat obstruct the breathing, inasmuch as this kind is but seldom worn, and only for short periods at a time, and only by persons with tolerably strong breathing apparatus. It is very different with the other kind.

The second kind of respirator is for simply warming the air as it is being inspired when it is too cold to be breathed by sensitive or irritable lungs, and it requires, therefore, a special material and a special construction, because it has to be worn by a special class of persons, who are always weak in their breathing apparatus, and it has frequently to be worn for several hours at a time. The climatic respirator is the kind generally meant when the term respirator is used, it being the one worn by the general public.

The sole object of the climatic respirator is, as already stated, simply to warm the air as it is being drawn into the lungs—not to purify or disinfect it, or to retain the warm foul air to be re-breathed. At each expiration the breath should pass altogether *through* it and away, and at each inspiration an entirely fresh supply of air should come through it into the lungs, and it should be warmed as it comes through.

Now, in order to warm the in-coming fresh air, the respirator must itself be warm. But how can it become warm? By its abstracting the warmth from the breath being breathed out through it, and only in this way. It must, therefore, be made of a material that will rapidly abstract the heat from the air being breathed out. Now, what is the best material for this purpose? Undoubtedly it is one of the elementary metals, such as iron, silver, gold. It must also be able to give up this warmth to the in-coming fresh air, and that rapidly. Now, fortunately, the same material that most rapidly abstracts heat also most rapidly gives it up again. Consequently all climatic respirators should be made of metal—not of muslin, crape, cotton, silk, wool, sponge, or charcoal; these are the materials for mechanical and chemical respirators, not for climatic.

To be a good respirator, it must also offer very little obstruction to the passage of air through it; it must be open, netty or gauzy, and it must be of such a size as to cover the mouth, and it must contain as much metal as will afford a good warming power—and the more metal the greater the warming power,—and yet it must be of very little weight. It cannot, therefore, be made of metal *plates*, as these would be too heavy, and would offer too much obstruction to the passage of air. What, then, is the best construction to provide a large quantity, or rather a large surface, of metal with very little obstruction and very little weight? Undoubtedly it is that of fine wire-work; certainly not plates, however freely perforated. There are, then, four essentials of a good climatic respirator—1st, it must provide a good warming power; 2nd, it must be made of material that will rapidly abstract heat from the out-going air, and rapidly give it up again to the in-coming air; 3rd, it must be so constructed as to offer the least possible obstruction to the passage of air; and 4th, it must be light.

The climatic respirator must, therefore, be made of layers of very fine metallic wire, fixed in a frame, and covered only with some very open and light material, like net or crape. The amount of warmth-affording power will, of course, depend upon the number of layers of wire-work. A minimum number may be fixed in the frame, and one or two extra layers supplied loose, to be fitted in according to the coldness of the air.

Such is the construction of a proper climatic respirator, and the profession should positively refuse to recommend one of any other material or any other construction; and such a respirator can be manufactured so as to be sold at from 5s. and upwards, according to the kind of metal used and the number of layers supplied. A climatic respirator should be worn by all persons with delicate or irritable lungs—that is, by persons who cough or feel constriction of the chest on going out without a respirator when the air is cold—that is, when it is at or below 45° F.; and they should have a proper respirator that will remain in its place all the time they are exposed to the cold air; and they should then always breathe and talk through it, and never take it off whilst exposed, and never then breathe through the nose.

A silk pocket-handkerchief or woollen muffler, or fur muff, or any such like substitute, should never be employed, not only because such articles are frequently removed, allowing cold air to rush into the lungs, but because the only warmth they can afford is by retaining the warm foul air breathed into them, so that it may be re-breathed.

Yours truly,

Liverpool, Feb. 20th, 1878. JOHN W. HAYWARD, M.D., &c.

Mr. L. H. Ryan.—There are no such corporations or bodies in India. The Presidency Universities (Bombay, Calcutta, and Madras) grant the degrees of M.B., Lic. Med., &c., which are mainly, if not wholly, taken by natives. Certificates of lectures and hospital attendance in India are received by the various examining bodies in England.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—May I ask you to state, on behalf of myself and of my colleagues on the Hydrophobia and Rabies Committee of the British Medical Association, that we should be glad to receive any intimation from medical men of any case of hydrophobia which actually comes under their notice, and in which they would be willing to allow Dr. Burdon-Sanderson, or Dr. Lauder Brunton, and myself to witness the progress of the case. Faithfully yours,

Queen Anne-street, March 19th, 1878. GEORGE W. CALLENDER.

*** Dr. Stafford, of Bagshot, has under his care five cases bitten by the same dog, to which the attention of the Committee might with advantage be directed.—ED. L.

NITRITE OF AMYL IN AGUE.

To the Editor of THE LANCET.

SIR,—I see in your columns of Jan. 19th, a letter from Dr. Kiernander, objecting to the use of nitrite of amyl in ague on theoretical grounds; and as I have experienced the effects of the drug on my own person, a few words on facts, and not theories, may not be out of place.

Within the last six months I have suffered from numerous attacks of severe malarious fever, sometimes of the remittent and sometimes of the intermittent type. In each attack frequent vomiting was one of the most distressing symptoms both during the cold and hot stages, and each attack was followed by distressing dyspeptic symptoms (a sense of weight in the epigastric and hypochondriac regions, with loss of appetite) for three or four days.

About two weeks ago, when I had been free from fever for some time, and had left off taking quinine, an unexpected attack came on, and I then tried the nitrite of amyl for the first time, putting three drops on a handkerchief, and inhaling it at the beginning of the cold stage. In a few seconds my face and neck became flushed, and in a few minutes the chilly feeling all over my body completely passed away; in fact, the cold stage was simply *nil*, and the hot stage, which followed, was much shorter than usual. No vomiting took place from beginning to end, and the sense of weight in the upper region of the abdomen, which had previously followed each attack, and persisted for three or four days, was entirely absent.

I have since had one attack of intermittent fever, but unfortunately at the time had no nitrite of amyl at hand; consequently the attack lasted a much longer time, and was followed, as usual, by dyspeptic symptoms for some days, and during the attack frequent vomiting was, as formerly, one of the most distressing symptoms.

In speaking thus favourably of the use of nitrite of amyl in the cold stage of ague, I do not mean for a moment to compare it with quinine, or imagine that nitrite of amyl could possibly take the place of quinine; but everyone who has seen much of malarious fevers must know that they often come on quite unexpectedly, and, when such is the case, no one who has not suffered from severe malarious fever, such as is seen in Jessore, can imagine what a relief it is to be spared the frequent distressing vomiting and subsequent dyspeptic symptoms, relief from which is attained by so simple a means as the inhalation of a few drops of nitrite of amyl. Your obedient servant,

GORDON PRICE, M.D.,

Jessore, Feb. 14th, 1878. Civil Surgeon, Jessore, Lower Bengal.

To the Editor of THE LANCET.

SIR,—If I may be permitted to do so, I will again state, but in a more concise way, my experience of the use of nitrite of amyl in ague.

My remarks in the first letter, which appeared in your number of Jan. 5th, in which I mentioned briefly the steps and conclusions that first led me to adopt this treatment, seem to have been mixed up with the remainder of my letter, so as to produce an erroneous impression of what I meant to convey in the minds of some of your readers. I did not mean to advise its adoption in lieu of quinine, but merely to supplement its use, although I added that it has answered instead of quinine in some of my cases. I maintain that the inhalations of amyl, used during the cold or hot stage of ague, will reduce the severity and duration of the paroxysms, and enable one-sixth part of the quantity of quinine, ordinarily used, to answer just as well as the larger dose, thereby reducing the enormous yearly expenditure on quinine in India and our colonies to one-sixth its present amount. If quinine is not scarce, or, in other words, the supply insufficient for the demand made on it, what has made its price rise from five or six shillings an ounce to two guineas in one place in Great Britain last year? Surely this fact speaks for itself.

It is no easy matter to know when your patient has incurred a *fresh* attack of ague, if resident in a place where intermittents abound, and if constantly exposed to those climatic influences which have already affected him. Quinine is generally used after a paroxysm has begun to wane and during the interval, more especially an hour or two before an expected paroxysm, to prevent a recurrence, which it, however, often fails to do. Should the paroxysm begin, it is then that nitrite of amyl is most useful in place of the old form of treatment, acting as a powerful febrifuge and diaphoretic, and saving a patient many hours' suffering. I have seen no ill-effects from its use.

As regards the cases being truly malarial, many of them had been sent out to my hospital as such to give them the benefit of change of air before being invalided home, after the usual treatment had failed to cure them. All the cases of ague that came under my care were treated in the same manner with nitrite of amyl, and I seldom failed to benefit them, if not cure them. Yours truly,

Cosham, Hants, Feb. 20th, 1878. W. E. SAUNDERS, A.M.D.

ARTS EXAMINATIONS.

THE preliminary examination for the diplomas of Fellow and Member of the Royal College of Surgeons, which has been going on at Burlington House during the last few days, will be brought to a close this day (Saturday). It is stated that 340 candidates offered themselves—viz., 98 for the Fellowship, and 242 for the Membership.

M.D.—L.R.C.P. does not give the right to the designation "doctor." The holder has therefore no right to assume the title.

THE SECOND SOUND OF THE HEART, AND ITS ACCENTUATION IN AORTIC ANEURISM.

To the Editor of THE LANCET.

SIR,—In my last letter I advanced a new view of the second sound of the heart. I will now, with your permission, put forward something in support of that view, and at the same time state my objections to the theory which Dr. Linde holds as to the cause of the accentuation of the second sound in aortic aneurism.

Immediately before the ventricular systole the blood in the aorta is lying upon the semilunar valves. When the systole occurs, blood is forcibly thrown into the aorta, where its lodgment is effected, partly by the displacement of the aortic blood in the direction of the driving force, and partly by the dilatation of the aorta.

Now, it seems to me reasonable to believe that the force with which the blood is thrown out of the ventricle is sufficient to cause a vacuum at the commencement of the aorta as deep at the very least as the pouches of the valves, and that the second sound is caused by the contact of the blood-column with the surface of the valves on falling or being forced through this vacuum by the elastic recoil of the aorta; in fact, that we have in the aorta with its semilunar valves and contained blood, a *blood-hammer* mechanism in the production of the second sound.

In an aneurism the elastic coat of an artery is much stretched; this stretching must, and does, cause impairment of recoiling power in the affected portion, as is evidenced by the feeble pulse on the distal side of an aneurism.

Given, then, an aortic aneurism. The blood thrown into the aorta by the systole, being resisted on the distal side on account of the impaired propelling power of the walls of the aneurism, must, on the aortic recoil, be driven with greater force than the normal in the direction of the semilunar valves, where there is no resistance at all, and hence the accentuation.

I object to Dr. Linde's theory—firstly, because I think the impairment of propelling power in the diseased portion of the aorta, as above indicated, is quite sufficient to explain the accentuation; and secondly, because I think that the action of the ventricle is so powerful in comparison with that of the arterial walls that the influence of any eddies, caused by the recoil of the aorta upon the blood passing into the sac of an aneurism, in opposing the onward flow of the blood ejected by the ventricular systole would be almost *nil*.

Yours obediently,

Peterborough, Feb. 25th, 1878. C. R. ILLINGWORTH, M.B.

House-Surgeon.—The letter alluded to has unfortunately been mislaid. Will our correspondent kindly repeat the question?

Medical Jurisprudence.—The wounds might have been inflicted in a case of face presentation.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In your report of the last meeting of the Medical and Chirurgical Society there is a slight clerical error, which I must ask you to be kind enough to correct. I am reported to have stated that the mean mortality in operations for stone at the Wolverhampton and Staffordshire General Hospital in patients between 40 and 80 is 11·5. It should be 1 in 5. Yours respectfully,

Edgbaston, March 18th, 1878. JAMES F. WEST.

THE UNIVERSITIES OF GLASGOW AND MELBOURNE.

To the Editor of THE LANCET.

SIR,—In common with other Australians studying medicine in the mother country, I have watched with some interest the letters appearing in your columns referring to the Universities of Glasgow and Melbourne, and at first looked upon the matter as another instance of the jealousy and protectionist spirit which Australians know only too well exists in Melbourne; but on reading "Cantab.'s" letter I felt (particularly as I am myself studying at Glasgow, and have friends in New South Wales holding that degree) that the affair was getting "too warm" for me to keep neutral. So I have made inquiries into the matter, and find that at present we have some seven students from the Australian colonies studying here, of whom only two have availed themselves of the opportunities offered at Melbourne for medical study; they have received no undue preference, only receiving credit *pro tanto* for any certificates of examinations and lectures they produced; and, further, I can say, on the authority of a member of the Faculty of Medicine here, in no case have students from Melbourne received credit for branches of study they could not produce certificates for. Now, Sir, in common justice, I think "Cantab." should either produce evidence for such statements as he has made reflecting on the Glasgow degree, or confess himself wrongly informed.

I am, Sir, yours &c.,

Glasgow University, March 14th, 1878. W. BRADLEY VIOLETTE.

TREATMENT OF CHOLERA.

To the Editor of THE LANCET.

SIR,—I see in your issue of last week that a surgeon in India has tried the injection of chloral in cholera, and lost 60 per cent. of his patients. I have tried oil of cinnamon in an outbreak on board an Indian emigrant ship, and every case recovered. I have no doubt that the above medicine is a specific for cholera. Yours &c.,

Exeter, March 18th, 1878. T. D. ATKINS, M.R.C.S.

"SIMPLE COUNTER PRACTICE."

To the Editor of THE LANCET.

SIR,—With reference to your notice of this subject, will you allow me to ask the solicitor to the Society of Apothecaries what he means by simple counter practice"? Does Mr. Upton not know that there can be no "simple" prescribing for the simple reason that, for want of medical education, chemists cannot diagnose "simple" from dangerous diseases? Does Mr. Upton mean to say that so long as cases turn out to be "simple" cases, no prosecutions shall be sanctioned; but that when cases ignorantly supposed by chemists to be "simple" turn out to be serious, prosecutions will be sanctioned? Nothing could be more unfair to chemists than such an arrangement as this. On the one hand, it would afford them encouragement to "doctor the public"; whilst, on the other hand, it would be ready, and laying in wait for them, to crush them the moment they fall into the trap thus prepared for them.

A few months since evidence was laid before Mr. Upton to show that a chemist had for two or three days prescribed carbonate of ammonia and magnesia for a ship captain, who was suffering from headache and vomiting. The case was one of "simple counter practice," though the poor man was so mortally afflicted that he died, whilst under my care, forty-eight hours after he had had his last bottle of carbonate of ammonia prescribed for him by the chemist for "simple stomach disturbance"; whereas he had, instead, congestion of the brain, associated, most probably, with tubercular meningitis. Other evidence of a similar character having been laid before Mr. Upton, a prosecution was sanctioned by him; yet the evidence in either case proved only "simple counter practice."

I have had cases where small-pox patients have been going backwards and forwards to be prescribed for by chemists, who mistook their small-pox for simple eruptions, and I am at this moment treating a small-pox patient who had been previously doctored across the counter by a chemist, who adopts a course of "simple counter practice."

Some explanation is due to the profession from the Society of Apothecaries as regards this alliance with the chemists in their "simple counter practice," and it is to be hoped that Mr. Upton will afford it.

I am, Sir, your obedient servant,

March, 1878. L.R.C.P. Lond.

THE BARBER FUND.

To the Editor of THE LANCET.

SIR,—I beg to acknowledge, with thanks, the following contributions to the above Fund:—

Cæsar Hawkins, Esq., London	£5	0	0
Dr. Barr Meadows, London	1	1	0
T. Corbett, Esq., Kingston-on-Thames ..	1	1	0
F. A. E.	0	5	0

Further subscriptions are urgently needed.

I remain, Sir, yours truly,

Crickhowell, March 19th, 1878. PHILIP E. HILL.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Pavy, London; Dr. Brown-Séquard; Mr. George Lawson; Mr. Callender, London; Dr. I. B. Yeo, London; Dr. Buzzard; Mr. O. Pemberton, Birmingham; Mr. Bader; Dr. M'Ewen, Glasgow; Mr. Bradburn, Trinidad; Mr. Grant, Malta; Dr. Maxwell, Vienna; Mr. Foulds, Yeddo; Mr. Gamble, Torquay; Mr. Michels, New York; Mr. Agnew, Hobart Town; Mr. Henderson, Linlithgow; Mr. Spanton, Hanley; Mr. Moore, Moreton-in-Marsh; Mr. Rutherford, Newcastle-on-Tyne; Dr. Lima, Bahia, Brazil; M. E. Decroix, Paris; Dr. Godson, London; Mr. Dolan, Halifax; Mr. Keene, London; Mr. Napier, Fraserburgh; Captain Mercier, London; Mr. Moulding, Liverpool; Mr. Corsellis, Wandsworth; Mr. Miller, Philadelphia; Dr. Vacher, Birkenhead; Dr. Williams, Bangor; Dr. Violette, Glasgow; Dr. Smith, Kilburn; Dr. Hardwicke, Sheffield; Dr. Tatham, Manchester; Dr. Pickering, Bolton; Mr. Campbell; Mr. Higgens; Dr. Austin; Dr. Day; Mr. H. W. Hart; Mr. Bradford; Messrs. Newbery and Sons; Dr. Gale, Manchester; Dr. Custer, St. Gall; Dr. Walker, Kirkham; Dr. Coales; Dr. W. D. Jones, Ruthin; Mr. Atkins, Exeter; Dr. Thompson, Omagh; Dr. Shearer, Liverpool; Mr. L. A. Ryan, Cambridge; Mr. Maskelyne, Faringdon; Dr. Crocker; Mr. Lucas; Mr. Lush, Devizes; Dr. Caton, Liverpool; Dr. Chalmers; Dr. Maclagan, Dundee; Dr. Holland, Newcastle-on-Tyne; Messrs. Allen and Hanbury; Mr. Hatherly, Nottingham; Mr. Browne, West Bromwich; Dr. Howard; Mr. Odell, Hertford; Dr. Dickinson; Mr. Sealy, Brant; Dr. Redmond, Gateshead; Registrar-General of Births &c.; The Secretary of the Dental Hospital; Cantab.; An Outsider; Melampus; Surgeon-Major; L.R.C.P.; M.D.; Orovesa; Carte; Druggist; A. B. C.; R. W.; House-Surgeon; A late Steamship Surgeon; P. E. L.; Neptune; Delta; W.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Watson; Mr. Stewart; Dr. Eade, Norwich; Dr. Pasquale Morelli, Naples; Mr. Kendall; Mr. Lee; Mr. Baker, Bilston; Dr. Keeling, Sheffield; Dr. Grime, Blackburn; Mr. Dickson, Bootle; Mr. Knight; Mr. Corner; Dr. Meadows; Mr. Chute, Bristol; Dr. Coleman; Mr. Kelly, Waterford; Miss Johnson, Epsom; Dr. Chittenden, Lee; Mr. Thomson; Mr. Webb; Messrs. Reed and Co.; Dr. Williamson, Ventnor; Mr. Hill; Mr. Carden; Dr. Hitchcock; Mr. Williams; S. W., Dover; F. M. C.; Physician, Birmingham; L. S. A., Liverpool; Medicus N.; Alpha; Surgeon; Studens; Medicus, Blackburn; A. C.; G. D.; A. B.; R., Manchester; Medicus, Aldgate; C. F. L., Broomfield; H. Z. H.; C., Chepstow; Y. N. A.; Locum Tenens; H. B.

Home Chronicler, Pioneer, British Architect, Paris Herald, Carnarvon and Denbigh Herald, Newcastle Daily Chronicle, Financial Opinion, Argus, Cork Constitution, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, MARCH 21ST, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 15	30·42	N.E.	37	39	..	46	34	..	Overcast
,, 16	30·63	E.	33	38	..	43	34	..	Overcast
,, 17	30·55	E.	36	40	..	50	28	..	Cloudy
,, 18	30·37	N.	46	49	..	53	38	..	Overcast
,, 19	30·29	N.	47	49	..	54	47	..	Overcast
,, 20	30·44	N.W.	46	49	..	56	47	..	Overcast
,, 21	30·31	W.	45	48	..	57	46	..	Overcast

Medical Diary for the ensuing Week.

Monday, March 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Drs. Manson and Cobbold, "On Filaria Sanguinis Hominis clinically considered in reference to Elephantiasis, Chyluria, and allied Diseases" (with Specimens).

Tuesday, March 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Garrod, "On the Protoplasmic Theory of Life, and its bearing on Physiology."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. George Thin, "On the Condition of the Skin in Tinea Tonsurans."—Mr. L. Purves, "On Paracentesis of the Tympanic Membrane."—Dr. Southey, "On the Minute Anatomy of the Kidney as bearing on its Physiological Functions."

Wednesday, March 27.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Pavy, "On Points connected with Diabetes."
HUNTERIAN SOCIETY.—8 P.M. Mr. J. E. Adams, "On some rare forms of Iritis." Other Members will bring forward Cases.

Thursday, March 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On the Chemistry of the Organic World."

Friday, March 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Dr. Pavy, "On Points connected with Diabetes."
ROYAL INSTITUTION.—8 P.M. Weekly Meeting.—9 P.M. Professor Dewar, "On the Chemical Actions of Light, and their Electrical Relations."

Saturday, March 30.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Rev. W. Houghton: "The Natural History of the Ancients."

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For every additional line .	0	0	6	For a page	5	0	0

The average number of words in a line is eleven.

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Agent for the Advertising Department in France—

Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.